DOGFIGHT

Bf 109E

Battle of Britain

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CHAPTER 1

IN BATTLE

On 22 June 1940, when France finally fell, it saw no respite for the Bf 109E pilots of *Jagdgeschwader* (JG) 51. Theirs had been a hard fight, and one which had seen the unit (and JG 51's predecessor formations) in action from the war's very outset. Now, as elements of JG 51 moved up to bases along the English Channel coast, there was to be no general leave extended to its pilots, groundcrew or other personnel as was temporarily the case with most other Luftwaffe fighter units at that time. Instead, JG 51, under the command of Oberst Theo Osterkamp, busied itself with the task now at hand – the continuation of the air war against England.

According to some published accounts, JG 51's commander had simply shunned any opportunity for leave at what was surely a critical point of the war. And whilst the enthusiasm of Osterkamp and his men cannot be doubted, it is more likely the case that the *Oberbefehlshaber der Luftwaffe* (ObdL) understandably required at least a degree of defensive fighter cover on what was the new frontline of the Western Front, with JG 51 being one of those fighter units selected for that role. Joining it would be Bf 109E-equipped

I. *Gruppe* of *Lehrgeschwader* (LG) 2, along with I./JG 20, the latter being subsumed into JG 51 by becoming III./JG 51 on 4 July 1940.

Despite the obvious need to maintain a defensive fighter force facing England, and the fact that the enemy was perceived by Germany to be on its knees, the Royal Air Force (RAF) was not defeated yet. Indeed, as recently as 18 June, Prime Minister Winston Churchill had made a speech in which he had said '. . . the Battle of France is over. I expect that the Battle of Britain is about to begin.' For JG 51, that battle was to start very soon indeed.

By early July, the *Jagdwaffe* pilots were back from their period of leave, aircraft were declared fully serviceable, new fighters had arrived to replace losses of materiel, supplies and spares were in place and eager replacement pilots fresh from training filled out the various *Jagdgeschwader* establishments to make up for earlier combat losses. By the first week of July 1940, the *Geschwadern* were ready.

Not more than 72 hours after 6./JG 51 had settled into its new base at Desvres (on 22 June), Oberleutnant Josef 'Pips' Priller had claimed his sixth victory in the form of a Spitfire destroyed eight kilometres northwest of his home airfield. However, with no RAF fighters reported as lost that day, it must be concluded that Priller's claim was rather over-optimistic. That said, for their part, RAF fighter squadrons apparently claimed eight Bf 109Es destroyed around Abbeville that same day, and three others 'unconfirmed'. Again, no Luftwaffe losses can be matched to any of these claims. In a sense, it almost set the scene for overclaiming by both sides. This was something that was not only a feature of the Battle of Britain, but in all air combat throughout history.

The *Geschwaderkommodore* of JG 51 during the early part of the Battle of Britain was Oberst Theo Osterkamp, a highly decorated fighter ace of World War I who also made a handful of claims in the Bf 109E over France and the Channel in May–July 1940. Seen here with his wife, Fel Gudrun Pagge, in front of a Bf 108 Taifun in 1938, he served as commander of JG 51 from 19 September 1939 through to 23 July 1940, when replaced by Major Werner Mölders. Promoted to generalmajor, Osterkamp was given the position of *Jagdfliegerführer* 2, the commander of all fighter units in *Luftflotte* 2. (Tony Holmes Collection)

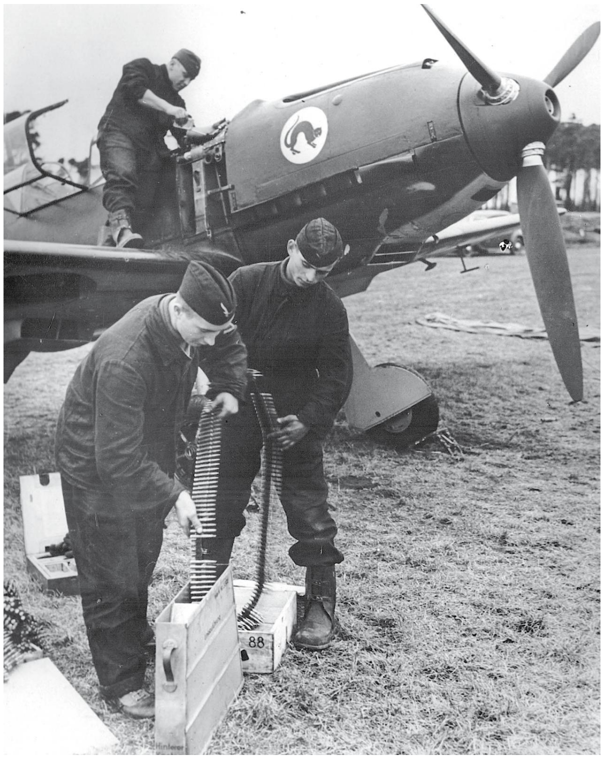
If things were off to a bit of a false start for JG 51, they were not to get much better for the unit over the next two to three weeks.

The lead-up to what would later become known as the Battle of Britain saw frenetic activity across northern France and along the English Channel coast as the Luftwaffe marshalled its various assets into position for the *Kanalkampf* (Channel Battle) of July and the first ten days of August 1940. Meanwhile, and joining JG 51 as the Bf 109E units assembled in the Pas-de-Calais to confront Britain, III./JG 3 arrived on 12 July, while elements of JG 26 and JG 52 were in place towards the end of that month.

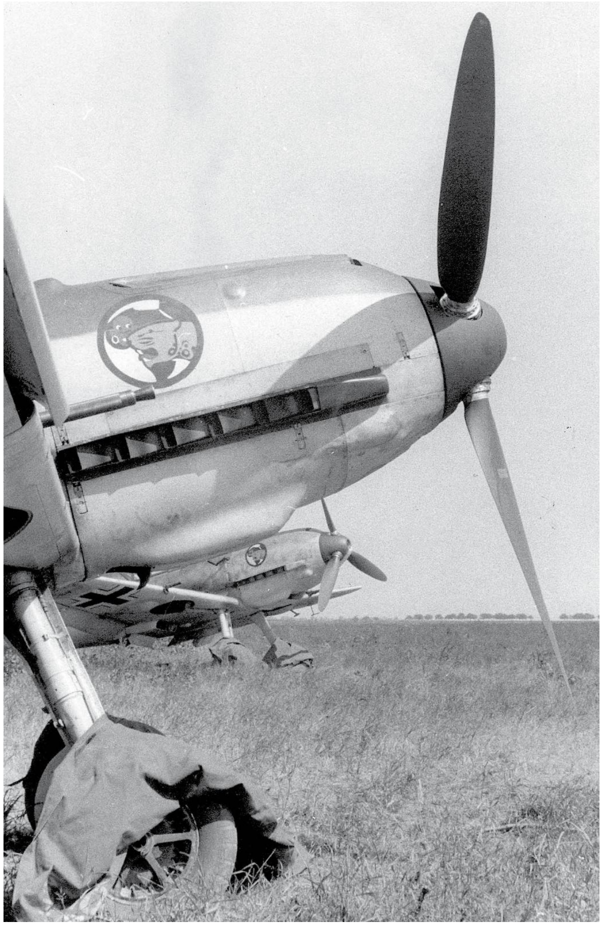
During this time, Oberstleutnant Max Ibel's JG 27 supported VIII *Fliegerkorps*. Although periods of bad weather led to difficult conditions on the soggy grass airfields of northern France, in the air, the *Jagdgeschwader* encountered no immediate problems. The area of the Channel and the Strait of Dover wherein the bulk of the initial shipping strikes took place were well within the combat radius of the Bf 109E.

Meanwhile, both Oberst Johannes Fink, who headed up the bomber force, and newly promoted Generalmajor Theo Osterkamp (who had now been moved from command of JG 51 to become overall fighter supremo, *Jagdfliegerführer* (*Jafü*) 2, on the English Channel coast) conducted the *Kanalkampf* with skill and vigour, continuously probing the defences of the RAF Fighter Command's No 11 Group. Bf 109Es gave escort and top cover to the Dornier Do 17 bombers, mainly of *Kampfgeschwader* (KG) 2, and Junkers Ju 87 Stuka dive-bombers that carried out these early shipping strikes.

Often released from protecting the bombers for their own freelance fighter sweeps, formations of Bf 109Es, frequently in up to *Gruppe* strength, roved the English Channel and the south coast at heights varying from deck level up to 25,000ft, while many of these almost impromptu sorties across southeast England saw Bf 109Es shooting up and destroying barrage balloons, particularly in the Dover area, if they found themselves unopposed by RAF fighters.



Armourers of JG 20 re-load the 7.92mm MG 17 ammunition containers from one of the unit's aircraft prior to the Battle of Britain. On 4 July 1940, the unit was subsumed into JG 51 and thus it and its black cat badge ceased to exist as pilots and aircraft were transferred to their new unit. The commander of JG 20 had been Hauptmann Hannes Trautloft from 19 September 1939 to 4 July 1940. (1940 History)



Elements of Major Max Ibel's JG 27 were among the Bf 109E units that moved up to the Pas-de-Calais for operations over the English Channel during July 1940. Here, aircraft of I./JG 27 wait for action at Guines, their tyres covered with tarpaulins to protect them from sunlight and heat damage. (1940 History)

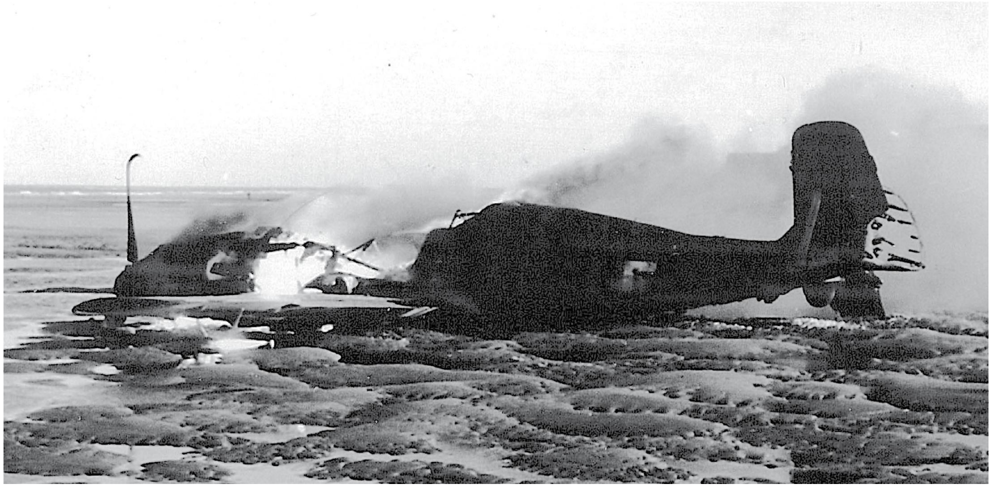
One thing that this early *Kanalkampf* period of the Battle of Britain achieved was to highlight – both to the Luftwaffe and to RAF Fighter Command – the basic weaknesses and deficiencies of the RAF's fighter tactics. The basic RAF formation was the section of three flying in Vic (V formation), with sections in echelon or in line astern. Operations in France and over Dunkirk had very largely put paid to what were the RAF's outdated Fighting Area Attacks, which had been the standard textbook procedure for British fighters during the 1930s. They were tactics which simply did not work in the context of modern high-speed aerial combat. Mostly, they were predicated upon the notion that RAF fighters would be attacking unescorted bombers, and were simply not tactics designed for fighter-versus-fighter combat.

Following a near disaster on 23 May 1940, Spitfire-equipped No 54 Sqn quickly pursued a policy of employing pairs of fighters, while fellow Spitfire operators No 19 Sqn preferred a section of six aircraft in loose pairs. Two months later, No 152 Sqn regularly flew its Spitfires in sections of two and four when in combat with Bf 109Es. Already, RAF Fighter Command was learning from the tactics used so effectively by its opponents. The Luftwaffe had developed those tactics in the Spanish Civil War. Other RAF squadrons followed rather more slowly in the development of formation tactics which were best suited to the thrust and parry of dogfighting. And when they did, it was usually after fierce combat with Bf 109Es in the skies over southern England.

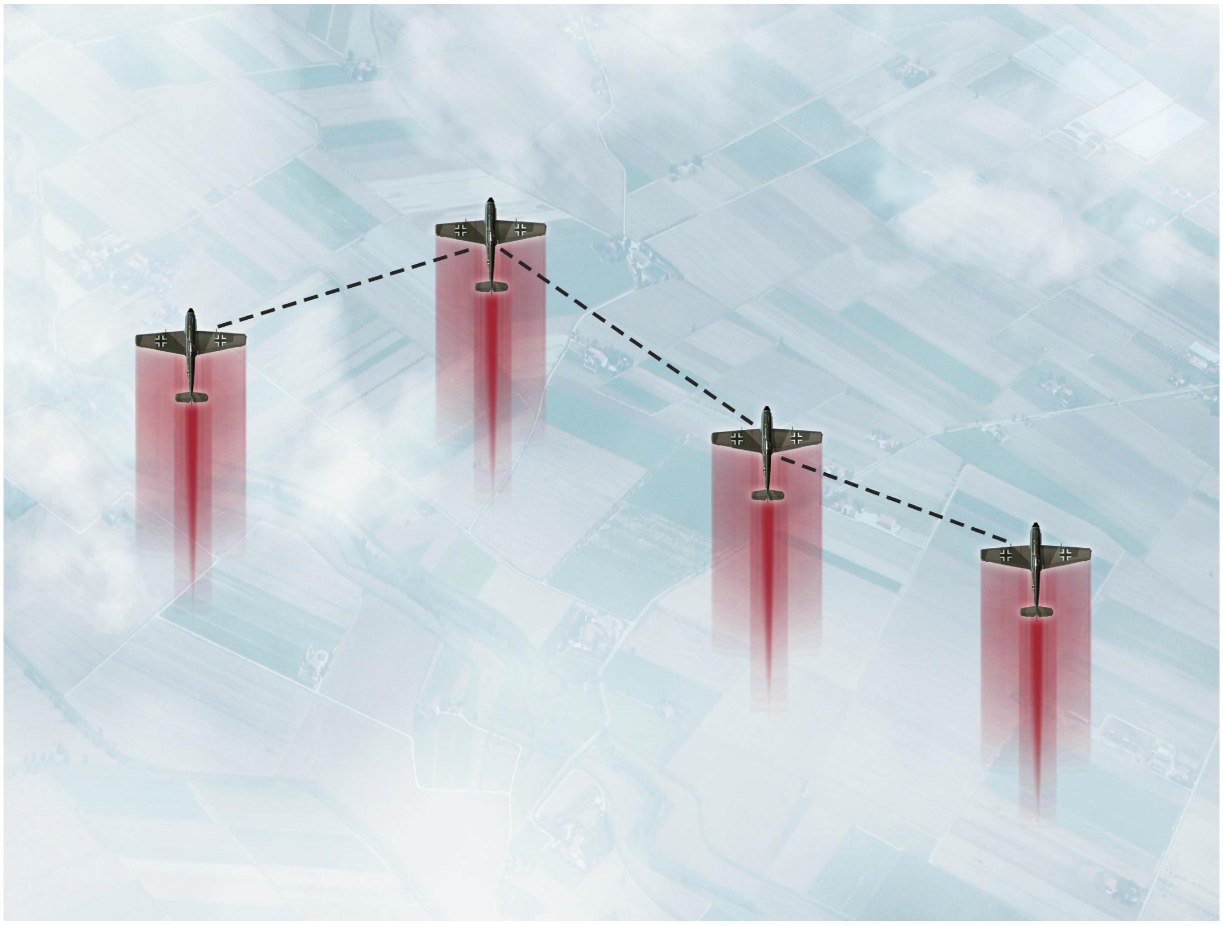
The Luftwaffe would use the basic *Rotte* and *Schwarm* to maintain fluidity and cohesion in all of its formations right up to *Gruppe* strength. Both were ideal for offensive fighter operations, but unfortunately for the Luftwaffe they were found to be of minimal value when they later had to be used in a tight defensive capacity for the escort of bomber formations. The fighter battles that took place during the *Kanalkampf*, however, offered a unique opportunity to compare the relative merits of pilots, tactics and machines of the opposing air forces.

Notwithstanding the dangers posed by the *freie Jagd* ('free hunt') tactics to RAF fighter squadrons, on some occasions both sides fought purely fighter-versus-fighter combats over the English Channel within equal distance of their airfields. In terms of combat experience, a large percentage of German fighter pilots encountered by their RAF counterparts during the *Kanalkampf* had seen much more action than they had. This was to count for a great deal in the ensuing battles of attrition, and those who had not served in the *Legion Condor* in Spain, or been rotated from Poland and Norway, had been in continuous action since the commencement of the *Blitzkrieg* on 10 May 1940.

The *Kanalkampf* reached its crescendo of activity on 8 August 1940 when, as part of the general escalation in operations, VIII *Fliegerkorps* Stukas and their escorting Bf 109Es made a determined attack on Convoy CW9 (RAF codename Peewit) in the English Channel. It was, thus far, the heaviest fought day of the air war now developing over Britain. This gave rise to the Air Ministry later declaring that the first day of the Battle of Britain was 8 August (this date was later revised to 10 July). The 8th also saw the highest number of victory claims – and, correspondingly, the highest number of Bf 109E losses – of the *Jagdverbande* over Britain so far. However, it was 13 August, *Adlertag* (Eagle Day), that properly saw the opening of the Luftwaffe air assault on Britain.



One of the early JG 51 casualties during the Battle of Britain was Oberfeldwebel Oskar Sicking of 1. *Staffel*, who struggled back to France in his battle-damaged Bf 109E on 20 July 1940, only to be killed when attempting to parachute from his fighter. The aircraft crashed on the beach north of Audinghen, in the Pas-de-Calais, at low tide and burned out. (1940 History)



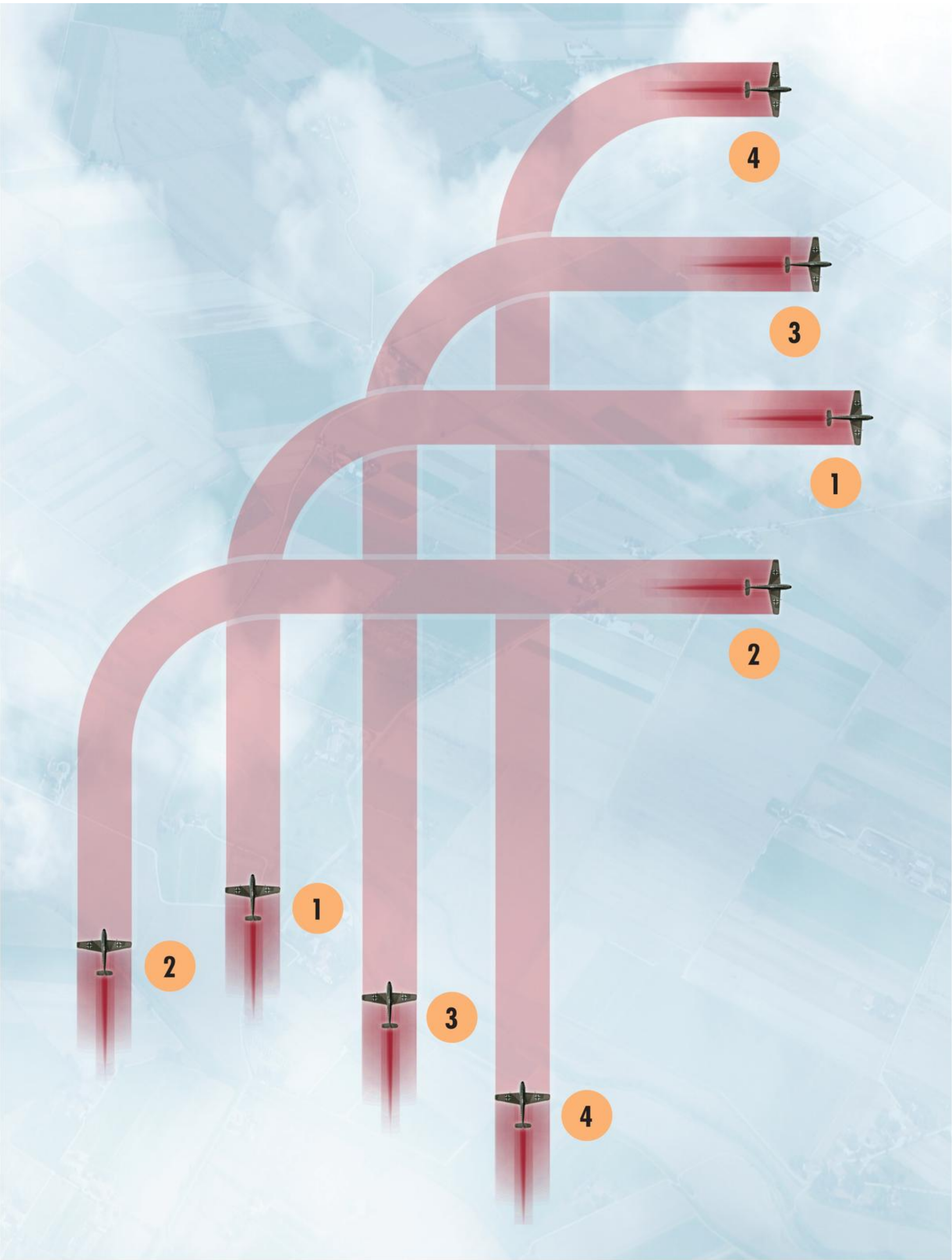
FOUR AIRCRAFT *SCHWARM* FORMATION AND CROSSOVER TURN

Developed out of combat experience, and evolved largely by Werner Mölders, battle formations configured on the *Schwarm* principle were first trialled in the Spanish Civil War by Bf 109 pilots serving with the *Legion Condor*. The *Schwarm* was based on the idea of two pairs of the basic *Rotte* (two aircraft) formation in which these two pairs flew together as a cohesive, and yet immensely flexible, three-dimensional unit.

The *Schwarm* was led by a *Rottenführer* and his wingman, who monitored and guarded his position. The second *Rotte* (again with a leader and wingman) of the *Schwarm* was echeloned rearwards. The aircraft flew wide apart, the two leaders looking ahead and the two wingmen concentrating on the rear. The second pair, flying behind the leader of the first pair, were all stepped up away from the sun. The leader's wingman would fly behind and low. This loose formation was possible because the pilots were flying close enough to see their leader's hand signals, but they could fly as far as 300–400m apart. The *Schwarm* would close up to keep contact when flying into cloud.

With this spread-out formation, and by pairing the fighters, a more extensive area of sky could be observed and the danger of midair collisions in tight formations was largely eliminated. In close formations, any tight change of direction for a flight or squadron was an exceptionally dangerous manoeuvre because of the narrow separation between aircraft. Now, with a wider separation and the aircraft in the formation all at different altitudes relative to each other, the crossover turn allowed a *Schwarm* to simply pivot 90 degrees and switch positions on the *Rottenführer*'s signal.

The tactical soundness of the *Rotte* and *Schwarm* during the Battle of Britain often gave Bf 109E pilots a distinct tactical advantage over their adversaries, who usually flew rigid and inflexible formations.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Lack of coordination at command level, along with variable weather, saw *Adlertag* marred by the conduct of Luftwaffe operations at the very start of what was to be a maximum effort designed to establish air superiority and, ultimately, bring Britain to the point of surrender. During a record 1,485 sorties, the Luftwaffe struck the airfield at Eastchurch, in Kent, in the morning, followed by attacks on Portland, in Dorset, Southampton, in Hampshire, and airfields in Hampshire and Kent in the afternoon. This operational effort was then exceeded on 15 August when all three *Luftflotten* directed attacks against RAF airfields.

The majority of attacks that day succeeded in arriving over their objectives, and included the RAF airfields at Hawkinge, Lympne and Manston, in Kent, Driffield, in the East Riding of Yorkshire, Martlesham Heath, in Suffolk, and Middle Wallop and Worthy Down, in Hampshire. The Short Brothers Stirling production site at Rochester, in Kent, was also hit. Insofar as range allowed, Bf 109E units had accompanied the majority of the bomber formations to their targets, but the losses inflicted on the Luftwaffe on 15 August ultimately caused a major recasting of German strategy.

Firstly, the casualties suffered by *Luftflotte* 5 off Northumberland and northeast England effectively put General Hans-Jurgen Stümpff's command out of the offensive. The fact that such a long operating range over the North Sea precluded the use of Bf 109E escorts would be the nail in that particular coffin, and highlighted the importance of the aircraft in escorting daylight bombing attacks against Britain.

Secondly, the success of the RAF's Nos 12 and 13 Groups in the north swung the major thrust of the battle almost exclusively back to southeast England, where Luftwaffe bombers could operate over shorter distances with Bf 109E cover. Nevertheless, and concerned over the performance of the Stukas and the conduct of the offensive since the start of *Adlerangriff* (Attack of the Eagles), as the overall assault was known, Reichsmarschall Hermann Göring, the *Oberbefehlshaber der Luftwaffe* (overall head of the Luftwaffe), held a conference on the evening of 15 August at his Karinhall residence. Regarding fighter escorts, he had this to say:

> The fighter escort defences of our Stuka formations must be readjusted, as the enemy is concentrating his fighters against our Stuka operations. It appears necessary to allocate three

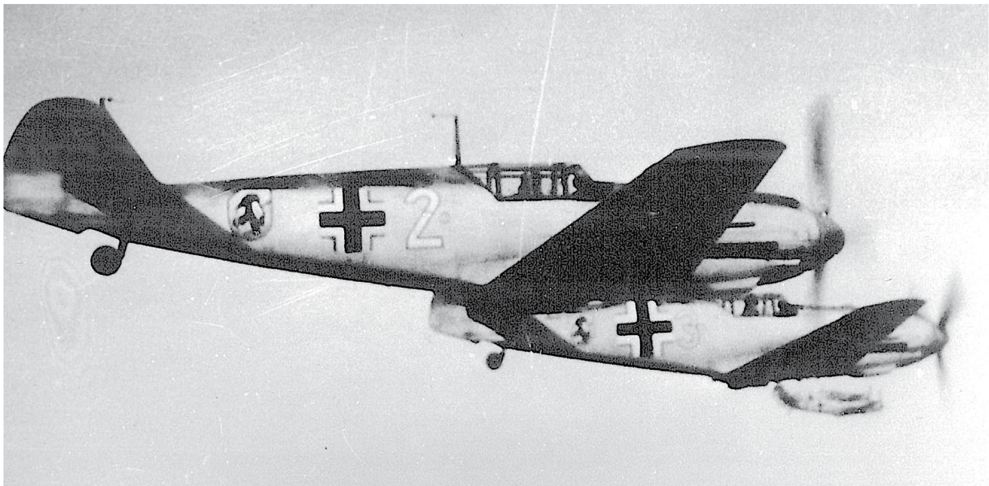
> *Jagdgruppen* to each Stuka group: one of these *Jagdgruppen* remains with the Stukas and dives with them to the attack, the second flies ahead of the attack at medium altitude and engages the fighter defences, and the third protects the whole attack from above. It will also be necessary to escort the Stukas returning from the attack over the Channel.

In fact, and although the operational use of the Stuka over Britain was curtailed from 18 August onwards, Göring's tactical directive in terms of Bf 109E protection of the Stukas was an eminently sensible one. The same could not necessarily be said for some of the directives he later handed down in respect of Bf 109E fighter operations over Britain. Nevertheless, and in terms specifically relating to the escort of Stukas in attacks on the south coast of England, these were primarily carried out from bases on the Cherbourg Peninsula – in effect, the widest point of the English Channel. The escorting Bf 109E fighters were therefore operating at extreme range, and were having to keep their speed down in order to maintain their position with their charges.

Reichsmarschall Hermann Göring's relationship with the *Jagdwaffe* quickly soured as the losses suffered by German bombers steadily rose during the Battle of Britain. In response, he issued a series of directives to Bf 109 pilots that greatly restricted their tactical freedom in the skies over southern England. The smiles on the faces of the pilots (from JG 2) surrounding Göring at Cherbourg-West in late October 1940 mask their undoubted feelings of animosity towards him. To Göring's immediate left is *Geschwaderkommodore*, and high-scoring ace, Major Helmut Wick. (Tony Holmes Collection)

However, the Luftwaffe was not currently getting it all its own way, and RAF Bomber Command was putting up a staunch counteroffensive against German targets in northern France. This meant that a considerable proportion of the efforts of the *Jagdgruppen* had to be directed (and to the exclusion of the overriding considerations of the offensive war) towards a *defensive* commitment against raids on the Channel ports and its own airfields.

Göring unfairly attributed the heavy losses recently suffered by the Stukas and other bomber units to a lack of aggression on the part of his *Jagdflieger*. He suggested that the fighter force had failed to fulfil its allotted task, asserting that its pilots had been more concerned with adding to their scores in combat with RAF fighters than with the vital task of covering the bombers. Undoubtedly, Bf 109E pilots preferred fighter sweeps to difficult close escort and escort cover missions in the vicinity of bomber formations. Göring insisted the *Jagdflieger* should exercise greater responsibility towards their charges, and in the air they should fly close alongside. On the ground, they should visit and liaise with the bomber units to ascertain their problems. It was the beginning of what was to be a lasting and increasingly bitter chastisement of the Luftwaffe fighter force that endured until the end of World War II.



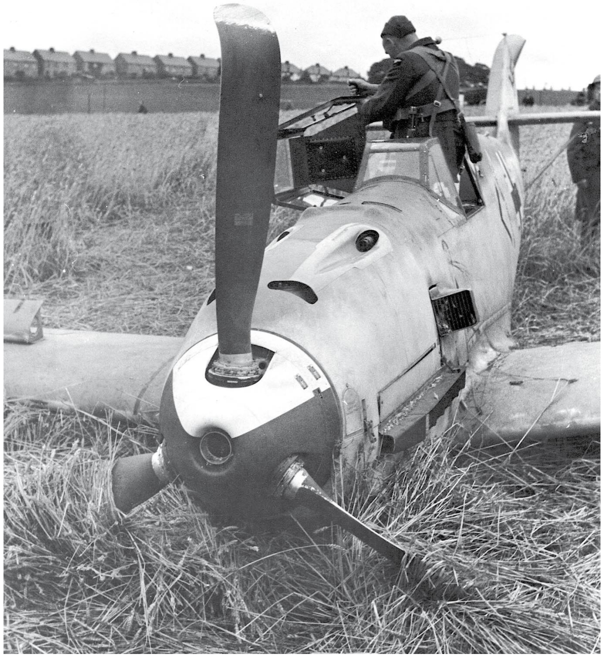
A *Schwarm* of four Bf 109E-1s from 4./JG 51 head out on a *freie Jagd* from Desvres in July 1940 during the early weeks of the *Kanalkampf*. (Tony Holmes Collection)

On 19 August, the Ops 1a section of the *Luftwaffen-fuhrungsstab* (Operations Staff) at *Oberkommando der Luftwaffe* (OKL – Luftwaffe High

Command) issued a directive in compliance with Göring's orders to authorise an all-out offensive against RAF Fighter Command. The directive stated:

> . . . to continue the fight against the enemy air force until further notice, with the aim of weakening the British fighter forces. The enemy is to be forced to use his fighters by means of ceaseless attacks. In addition, the aircraft industry and the ground organisations are to be attacked by individual aircraft by day and by night if weather conditions do not permit the use of complete formations.

The OKL had known for some time that the bulk of RAF Fighter Command's forces were concentrated around London, and that its sector airfields were vital in the command's defensive system. The resulting assault on the network of airfields in Nos 10 and 11 Groups during the critical period of 24 August to 6 September 1940 was to bring the Luftwaffe within grasp of achieving air superiority over the RAF fighter force based in southern England.



This Bf 109E-1 of *Stab* III./JG 26, flown by Oberleutnant Werner Bartels, was one of the Battle of Britain's early victims, force-landing at North Down in Margate, Kent, after being shot up by a Spitfire of No 65 Sqn at 1300 hrs on 24 July 1940. The gun troughs for the engine-mounted MG 17s seem to have been picked out in a lighter colour. Interestingly, the pilot had not jettisoned the cockpit canopy prior to crash-landing. This was standard procedure to allow a hasty exit, but Bartels was incapacitated through wounds and could not operate the jettison handle. RAF intelligence officers noted that, 'A new type of armour was fitted forming a back shield and a hood and shield behind and above the pilot's seat.' (1940 History)

With effect from 20 August, *Jafü* 3's fighter units were transferred, virtually *en masse*, from Cherbourg and Normandy to airfields in the Pas-de-Calais, where they were joined by Bf 110 units from Norway. This massive concentration of fighters was to furnish escort and support on medium penetration attacks on No 11 Group's defensive network in southeast England.

The role undertaken by Bf 109E units as the Battle of Britain evolved, and as its various phases were to play out over southern England, was surely a significant one. Indeed, it was the very key to enabling the Luftwaffe to conduct a daylight air offensive against Britain. Although the pilots of the *Jagdwaffe* entered the fray buoyed with enthusiasm and optimism, so their morale was to falter and be tested as the battle unfolded, losses increased and no appreciable advantage to the Luftwaffe could be perceived as the battle progressed. It was in those very early days of the *Kanalkampf*, however, that the shock of losses began to hit home for the *Jagdverbande* pilots.

Oberleutnant Werner Bartels was the *Technische Offizier* (Technical Officer) of *Stab* III./JG 26 when he was shot down and captured, badly wounded, at Margate. His injuries were so severe that he was repatriated in 1943. (1940 History)

Just as JG 51 was first into battle, it was also the first unit to start seeing losses. While the skirmishing of early July in the Dover area of the English Channel had resulted in some successes, the first losses occurred on 8 July (two days before the later 'official' start date of the battle) when Leutnant Johann Böhm's Bf 109E-3 of 4./JG 51 was hit and damaged during combat with the Spitfire flown by Sgt E. A. Mould of No 74 Sqn. As the Messerschmitt descended towards a forced landing at Bladbean Hill, in Elham, Kent, Mould continued pumping fire into the aircraft right up until it hit the ground. Slightly wounded, Böhm became the first Bf 109E pilot taken prisoner in England during the summer of 1940.

Not so lucky was Unteroffizier Konrad Schneiderberger, who was killed in that same combat when his Bf 109E-1 of 7./JG 51 was sent crashing into the sea off Dover, in Kent, by Flt Sgt W. H. Franklin of Spitfire-equipped No 65 Sqn. From here on in, Bf 109E losses would mount inexorably on the *Kanalfront*. Correspondingly, the morale of the Bf 109E pilots would begin to go into collective decline. Later that same day it was the turn of 3(*Jagd*)./LG 2 to lose one of its aircraft when Leutnant Albert Striberny was shot down by Flt Lt Basil 'Wonky' Way in a No 54 Sqn Spitfire, bailing out into captivity over Sandwich, in Kent.

Across the next few days, claims and losses on both sides rose as the Bf 109Es and the RAF's fighters battled it out over southeast Kent and the Channel. A number of Bf 109Es made it back to France with battle damage as it became increasingly clear to the Luftwaffe fighter pilots that this was not going to be a walk in the park. Then, on 24 July, a combined total of seven Bf 109Es from JG 26 and JG 52 were shot down, signalling an exponential increase in fighter losses that would only gather in pace over the next few weeks and months. It was a day that also saw the first losses over enemy territory during what is now recognised as the Battle of Britain when Oberleutnant Werner Bartels and Leutnant Josef Schauff of JG 26 were shot down over Margate, in Kent, with the former becoming a prisoner of war (PoW) and the latter losing his life when his parachute failed to open.

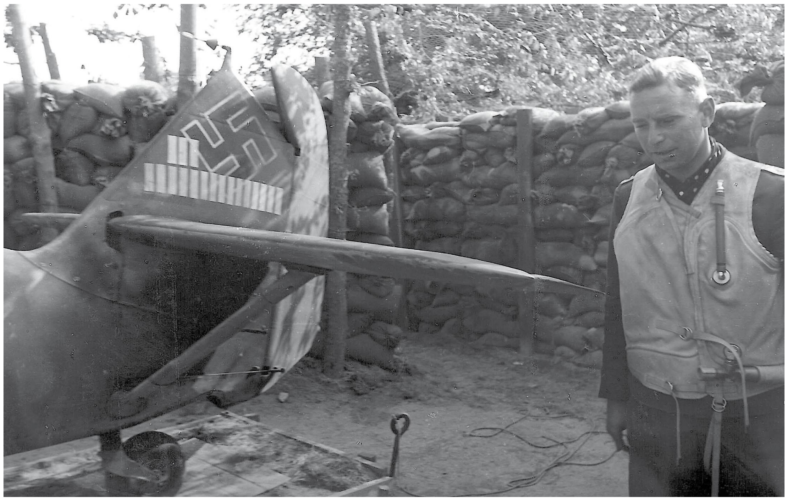
For the Luftwaffe's Bf 109E pilots, the Battle of Britain was truly underway.

CHAPTER 2

SETTING THE SCENE

In the Spanish Civil War, during operations by Luftwaffe units of the *Legion Condor*, much was made by the German propaganda machine of the first success by new fighter pilots and their aircraft. In Iberian skies, the Luftwaffe had fielded a significant force of Bf 109 fighters – initially A-0 models and, later, B, C, D and early Bf 109Es. And it was here, in Spain, that the new Messerschmitt fighter achieved its first combat success on 6 April 1937 when Oberleutnant Gunther Lützow shot down an I-15 biplane fighter (which he misidentified as a Curtiss Hawk).

Like many *Legion Condor* pilots, Lützow would go on to become a leading Luftwaffe ace. Along with other fighter pilots who had also made their mark in Spain – men such as Werner Mölders, Adolf Galland, Horst Tietzen, Rolf Pingel and Wilhelm Ensseln – Lützow would subsequently perfect his particular 'art' of warfare during fighting in the West and, later, during the Battle of Britain. By the end of 1937, both the Bf 109 and the men who flew the aircraft had already been well and truly 'blooded' in action.



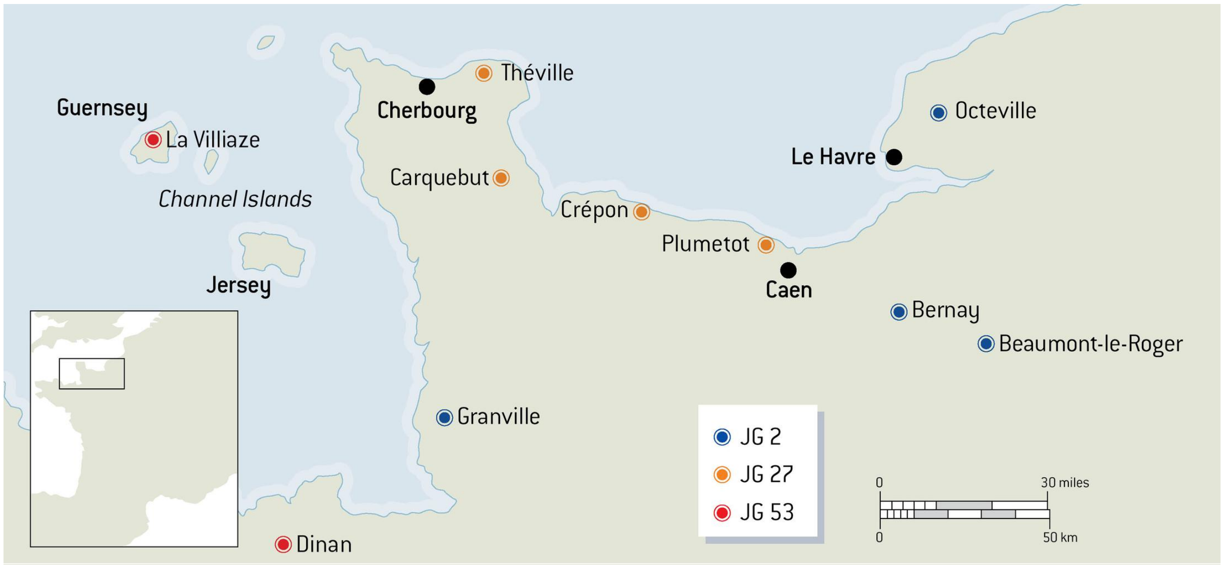
One of JG 51's early scorers over the English Channel was Hauptmann Horst Tietzen of 5. *Staffel*. Eighteen victory bars are marked on the fin of his Bf 109E, the 18th (a Spitfire) having been scored on 29 July 1940 off Dover. Tietzen's first seven victories came during the Spanish Civil War when flying with the *Legion Condor*'s 1./J 88 in 1938. Tietzen was shot down and killed on 18 August 1940, his fighter crashing into the Thames Estuary following combat with Hurricanes. (1940 History)

The RAF evaluated the flight characteristics of the Bf 109E using this example, Wk-Nr 1304, at the Aeroplane and Armaments Experimental Establishment at Boscombe Down from 3 May 1940. The fighter was formerly assigned to 1./JG 76, and both the aircraft and its pilot, Feldwebel Karl Hier, fell into French hands on 22 November 1939 following a forced landing near Woerth after combat with French MS.406 fighters. Upon his release from captivity, Hier returned to his unit (by then re-designated 4./JG 54) and had claimed a total of 14 victories by the end of the Battle of Britain. He was shot down off Shoeburyness and posted missing on 15 November 1940 in Bf 109E-3 Wk-Nr 1501 'White 11'. (1940 History)

Whilst the Messerschmitt fighter and what it was capable of were undoubtedly of great interest to the RAF and the Air Ministry in London, during the period leading up to World War II, the availability of an aircraft to evaluate eluded the British. This was not the case, though, for the French. In December 1937, Feldwebel Otto Polenz of the *Legion Condor* made a forced-landing in his Bf 109A-0 6–15 at Bujaraloz, and the aircraft was captured intact by Republican forces. The French were invited to examine the aircraft, although the technical and intelligence reports that were assembled as a result of this coup were not shared with the Air Ministry in London.

Doubtless, it was an evaluation that served the *Armée de l'Air* well when it came to preparing to fight the Bf 109 upon the outbreak of war in the West in September 1939. Such a clash took place as early as 8 September when Hawk H-75s of *Groupe de Chasse* II/4 were engaged with the Bf 109s of JG 53, with none other than Hauptmann Werner Mölders, *Staffelkapitän* of 1./JG 53, being injured in a subsequent crash that saw his aircraft overturn following a forced landing.

The RAF, however, had to wait until March 1940 before it finally faced the Bf 109 in combat when, on the 22nd of that month, the Hurricanes of France-based No 73 Sqn engaged aircraft from III./JG 53 over Bouzonville. In that episode, one of the British fighters was damaged, while Flt Lt Reg Lovett shot down Feldwebel Arthur Weigelt of 8./JG 53, who made a forced-landing but was unhurt in the incident. This was quite likely the first Bf 109 loss of World War II attributed to an RAF fighter aircraft in a purely fighter-on-fighter action. But if the British had smarted over the earlier French refusal to share the secrets of Polenz's fighter in Spain, they were about to get their hands on a Bf 109 'prize' anyway. And from the French, too!


Guernsey
La Villiaze
Channel Islands
Jersey
Cherbourg
Théville
Carquebut
Crépon
Plumetot
Caen
Le Havre
Octeville
Bernay
Beaumont-le-Roger
Granville
Dinan
JG 2
JG 27
JG 53
0
30 miles
0
50 km

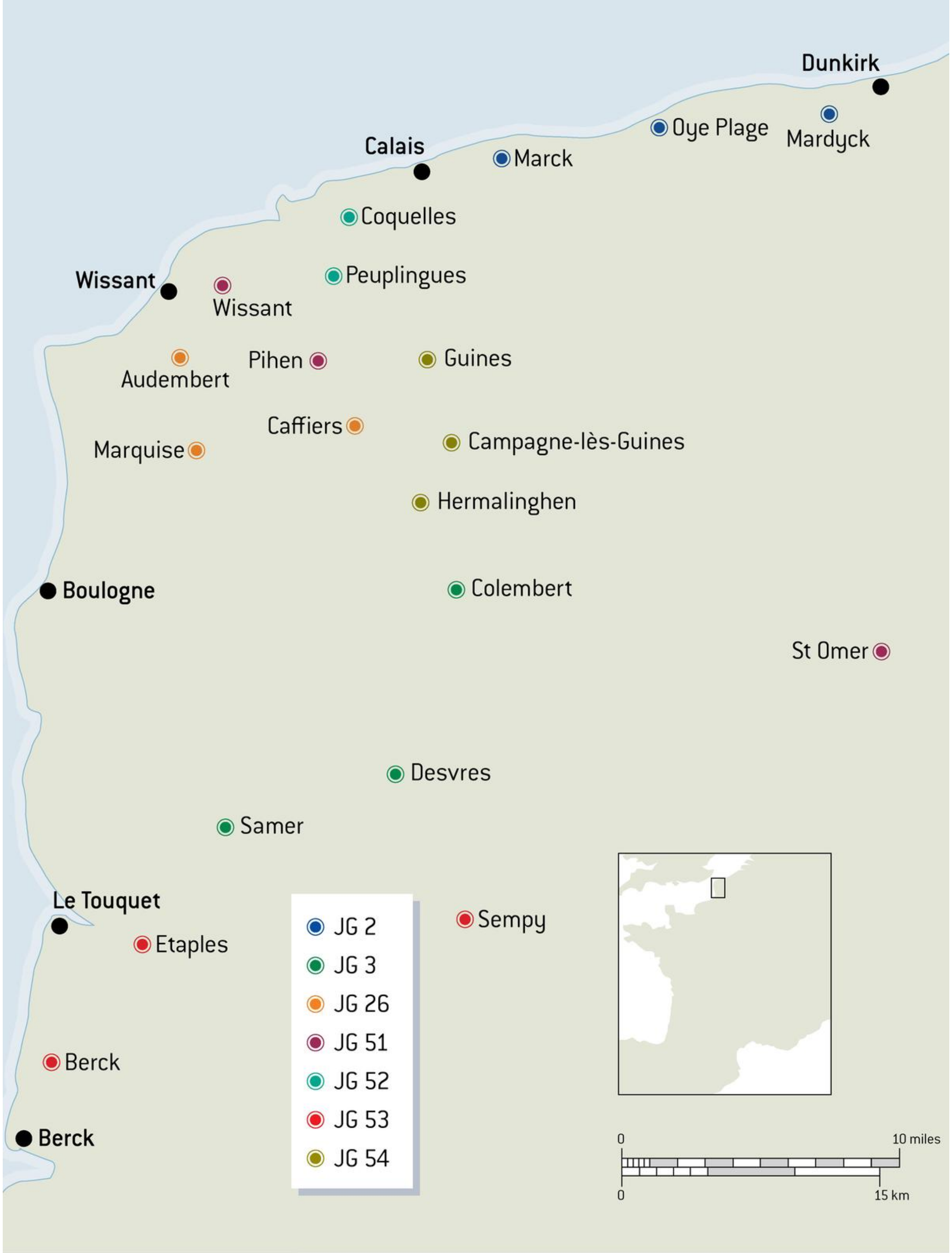
Airfield locations used by Bf 109E units in France between July and October 1940. At various times during the Battle of Britain, many of the fighter units on the Channel coast moved location. Thus, units were not necessarily permanently located at the airfields as indicated on this map throughout the entire period of the campaign.

Notwithstanding their allies' apparent early reluctance to share the Bf 109's secrets, things were different now. After all, the two countries were fighting side-by-side, and the sharing of technical information and intelligence was now vital for the furtherance of mutual survival. Thus it was that the RAF took delivery of Bf 109E-3 Wk-Nr 1304, formerly of 1./JG 76, which had fallen into French hands on 22 November 1939 after Feldwebel Karl Hier made a forced-landing near Woerth.

Initially evaluated by the *Armée de l'Air*'s *Centre d'Essais en Vol* at Orléans-Bricy, the aircraft was then handed over to the RAF – Flt Lt Mark 'Hilly' Brown of No 1 Sqn flew the fighter from France to the Aeroplane and Armament Experimental Establishment at Boscombe Down, in Wiltshire, on 3 May 1940. Here, it was subjected to a thorough evaluation that would add greatly to the RAF's knowledge of the Bf 109E in respect to both its technical attributes and fighting capabilities. That assessment quickly concluded that the Bf 109 was superior in most respects to the Hurricane, even when the latter was fitted with a Rotol propeller. The Hawker fighter could out-turn the Messerschmitt, however, and it also possessed superior low-altitude manoeuvrability. The lessons RAF Fighter Command learned from the test-flying of Wk-Nr 1304 were timely indeed.

With the capitulation of France and the withdrawal of British forces at Dunkirk in June 1940, so the Luftwaffe consolidated its foothold in what was now German-occupied Europe, moving its forces up towards the English Channel coast to be ready for the next phase of its war in the west – the conquest of Britain. Consquently, on 22 June, the ObdL ordered *Luftflotten* 2 and 3 to take up positions along the French Channel coast and on airfields in Belgium and the Netherlands.

The *Luftflotten* thus organised themselves across France, Belgium, the Netherlands and in Norway, the disparate forces comprising bomber, maritime, reconnaissance, long-range (Bf 110) fighter, dive-bomber, air-sea rescue and single-engined (Bf 109E) fighter units. Of these, the latter units were almost exclusively positioned along the Channel coast of France due to range considerations. From here, they would be ideally placed to offer fighter cover for the anticipated bomber offensive against the British Isles. Additionally, they could provide fighter opposition to RAF bomber incursions that might be made against the newly occupied German airfields.


Dunkirk
Oye Plage
Mardyck
Calais
Marck
Coquelles
Wissant
Peuplingues
Wissant
Audembert
Pihen
Guines
Caffiers
Marquise
Campagne-lès-Guines
Hermalinghen
Boulogne
Colembert
St Omer
Desvres
Samer
Le Touquet
Sempy
Etaples
Berck
Berck
JG 2
JG 3
JG 26
JG 51
JG 52
JG 53
JG 54
0
10 miles
0
15 km

As to the other operational Luftwaffe units deployed around the occupied territories, bomber units were essentially based at airfields much further inland, but positioned, tactically, in locations where the aircraft could easily reach targets across mainland Britain. For the most part, these were established sites that had, until very recently, been occupied by the defeated air forces of that country. As such, they were largely well-equipped to handle heavily laden bombers and had established infrastructure that included hard runways, hangars, accommodation, fuel storage and all the facilities that aided the operation of a modern air force.

Once settled in and re-deployed from their former bases in Germany, the bomber units were almost immediately ready to begin operations. Indeed, although the force comprised only medium bombers (Do 17s, Ju 88s and He 111s), there was now nowhere within the British Isles that was not within range.

While the ObdL directed the disposition of Luftwaffe forces to prepare for the upcoming assault on Britain, so many of the Bf 109 units were initially stood down and the pilots sent on leave for a few days. But this was most certainly the lull before the storm. This period also coincided with the release of 1,883 Luftwaffe PoWs who had been captured by the French and who, for the most part, returned to their operational units. Among those released was Major Werner Mölders, *Kommandeur* of III./JG 53, who had been captured when shot down near Chantilly on 6 June, and who would go on to achieve further successes across the period of the Battle of Britain.

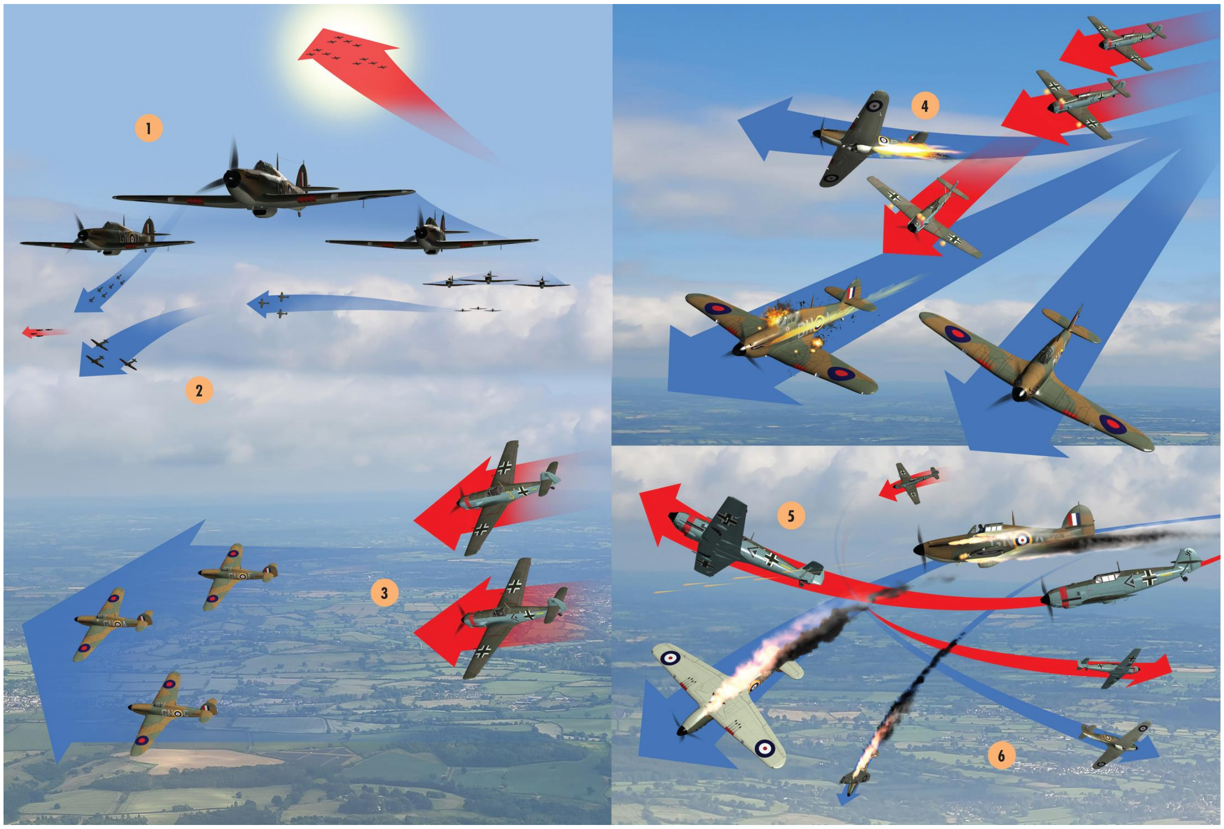
For the most part, Bf 109E units during the Battle of Britain operated from improvised airfields in the Pas-de-Calais. Here, ground personnel are building makeshift blast pens from sandbags and timber posts for the aircraft of III./JG 26 at Caffiers during the early summer of 1940. (1940 History)

Notwithstanding the release of so many prisoners back to active service, Luftwaffe losses since 3 September 1939 had been grievous. In total, some 1,814 aircraft had been lost along with 3,278 personnel – albeit that this latter figure includes the 1,883 PoWs returned from French captivity.

While bomber and other specialist units were now largely dispersed at their more inland airfields, the situation with the Bf 109E fighter force, however, was rather different. Primarily, the issue came down to one thing – operating range. Quite simply, and unless the fighter units were positioned right up on the English Channel coastline, they would be unable to escort bomber formations all the way to the target and back again. And even if they could, then things would be tight.

Allowing for just a few minutes loitering over England, or engaged in combat, the operating radius of the Bf 109E was extremely limited – and that was even with the fighters based right on the French coast. At best, an operating radius saw an arc encompassing southern England, broadly rising from just west of the Isle of Wight, around London and then out over Essex. Anything beyond that was out of range.

Surprisingly, the German air ministry, the *Reichsluftfahrtministerium* (RLM), had not seen fit to order the development or production of long-range drop tanks for the Bf 109 ahead of the battles during 1940. There had clearly been no need for the Bf 109 to be so equipped during the fighting over France and the Low Countries, and until the prospect of fighting over Britain loomed, it appears that the RLM had not really seen any pressing need for such an extension of range. And when it had, the RLM certainly acted upon that requirement in a somewhat tardy fashion. Only towards the end of 1940 did Luftwaffe fighter units begin to receive the long-range tanks that may well have made the Bf 109E a rather more effective player in fighter operations over Britain.


1
2
3
4
5
6

1345 hrs, 16 AUGUST 1940

NORTH OF SOUTHAMPTON

1 Twelve Hurricane Is of No 249 Sqn patrolling in vics of three, line astern, fly east to west north of Southampton.

2 One vic of three Hurricanes led by Flt Lt James Nicolson is detached to investigate a distant enemy formation, but the latter is intercepted by Spitfire Is of No 602 Sqn before the Hurricanes can reach them. Nicolson's vic turns back to rejoin the squadron, unaware that it has been spotted by a high-flying Bf 109E formation from 6./JG 53.

3 Diving out of the sun, Hauptmann Heinz Bretnütz, the *Staffelkapitän* of 6./JG 53, along with his wingman, bounce the three Hurricanes. Bretnütz homes in on the aircraft and opens fire on the Hurricanes flown by Nicolson and Plt Off Martyn King.

4 Almost simultaneously, Bretnütz hits both Hurricanes, setting them on fire. King abandons his crippled aircraft but falls to his death when his parachute collapses. It is later discovered that it had been badly damaged by cannon shells fired by Bretnütz.

5 Bretnütz now passes under Nicolson's burning Hurricane, giving Nicolson a chance to hit back. He presses his gun button as the Bf 109E passes across his gunsight and then bails out. He is badly burned and wounded by shell splinters.

6 Meanwhile, the third Hurricane, flown by Sqn Ldr Eric King, is damaged, forcing the pilot to beat a hasty retreat back to No 249 Sqn's airfield at Boscombe Down, in Wiltshire, as Bretnütz and his wingman break for home. Descending beneath his parachute, Nicolson is fired on from the ground. For his actions in staying at his controls to fire on Bretnütz, Nicolson is awarded the Victoria Cross – the only RAF Fighter Command VC of the war.

For reasons of limited range, therefore, ObdL had directed the fighter force to establish itself, quite literally, along the very northernmost parts of the French coast. In the west, *Luftflotte* 3 used Maupertus, Dinan, Querqueville and even Guernsey, while new strips were made at Crépon, Plumetot and Carquebet. From these airfields, elements of JG 2 initially commenced operations to discourage RAF bombing raids against Cherbourg and Brest. Further east, in the Pas-de-Calais, *Luftflotte* 2 established its fighter bases behind Wissant and Cap Griz-Nez, with a plethora of airfields springing up at places like Audembert, Marquise, Coquelles and Guines.

Major Adolf Galland and Major Werner Mölders confer on the Channel coast during the Battle of Britain. Amongst the new wave of *Geschwadern* commanders that took over *Jagdwaffe* fighter units in the summer of 1940, they were both leading exponents in the art of aerial combat in the Bf 109E. (1940 History)

Very often, these were improvised sites which simply took over swathes of open farmland that had been hastily converted for fighter operations. Such airfield 'construction' as took place was minimal, with fields simply rolled flat, ditches filled in, trees felled, improvised blast pens constructed and adjacent farmhouses and barns requisitioned for the various *Jagdgeschwadern*. Accommodation for personnel was very often situated away from the airfields and at suitable properties in nearby towns and villages. These temporary and improvised arrangements rather reflected what the Luftwaffe perceived to be the likely nature of forthcoming operations against Britain in what was expected to be a campaign of some brevity. In the event, it was a battle that was slugged out across almost four months, although the start and end dates can only be regarded as somewhat fluid.

Officially, and albeit that it was a date retrospectively set by the British, the Battle of Britain was deemed to have started on 10 July 1940. However, this was not a date recognised by the Luftwaffe, for not only did it fail to reflect any significant Luftwaffe operations, or the commencement of any particular phase of activity, it had no relevance to perceivable shifts in the tempo or nature of the German air war against Britain either. Even the head of RAF Fighter Command, Air Chief Marshal Sir Hugh Dowding, who retrospectively set the official dates of the battle, later conceded that they were somewhat arbitrary. And they were.

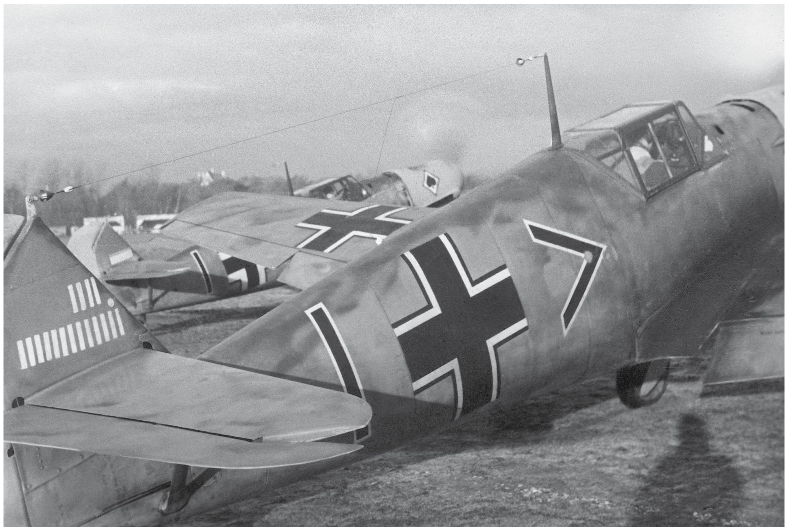
For the Germans, the events across the summer of 1940 were all just part of the *Luftschlacht um England* (air battle for England), and an almost seamless transition to an intensfied level of air operations, albeit operations which had been ongoing since October 1939, but which would greatly quicken in pace from June 1940.

Hauptmann Hans-Jürgen von Cramon-Taubadel commanded III./JG 53 during the early part of 1940. Although he was at least nominally on the *Gruppe* roster until 30 September 1940, he appears not to have played any operational part in the Battle of Britain. The role of *Kommandeur* for III./JG 53 was filled by Hauptmann Wolf-Dietrich Wilke from 12 August 1940, as von Cramon-Taubadel's marriage to a part-Jewish woman was viewed as wholly unacceptable by the Nazi hierarchy. It was a situation which led to unusual markings being applied to the Bf 109Es of JG 53. (1940 History)

By early July, the Bf 109 units were starting to be fully established across stretches of northern France closest to the English coast. However, just as the Battle of Britain was about to get into its stride, there were to be some changes in the command structures at the head of the Luftwaffe's fighter units. Hitherto, command of the *Geschwadern* had rested with experienced officers – men who were of senior rank, experienced pilots and respected leaders. In other words, the command rested with these officers by dint of seniority, and not neccesarily because of their fighting ability. Moreover, and in terms of that ability, they would perhaps not unreasonably be considered too old for the role of fighter pilot, let alone as fighter leaders.

Thus, from late July through to early September, Major Mölders took over JG 51 from Oberst Theo Osterkamp (who was promoted to Generalmajor), Major Galland assumed command of JG 26 from Major Gotthard Handrick, Major Lützow replaced Major Carl Vieck as Kommodore of JG 3, Major Hans

Trübenbach took over JG 52 from Major Hubert Merhart von Bernegg, Major Hannes Trautloft replaced Major Martin Mettig in command of JG 54 and Major Harry von Bülow-Bothkamp made way for Major Wolfgang Schellmann at JG 2. But in handing over JG 53 to Major Günther Freiherr von Maltzahn, the departure of Major Hans-Jürgen von Cramon-Taubadel hid a dark political story, and was likely for reasons other than age.

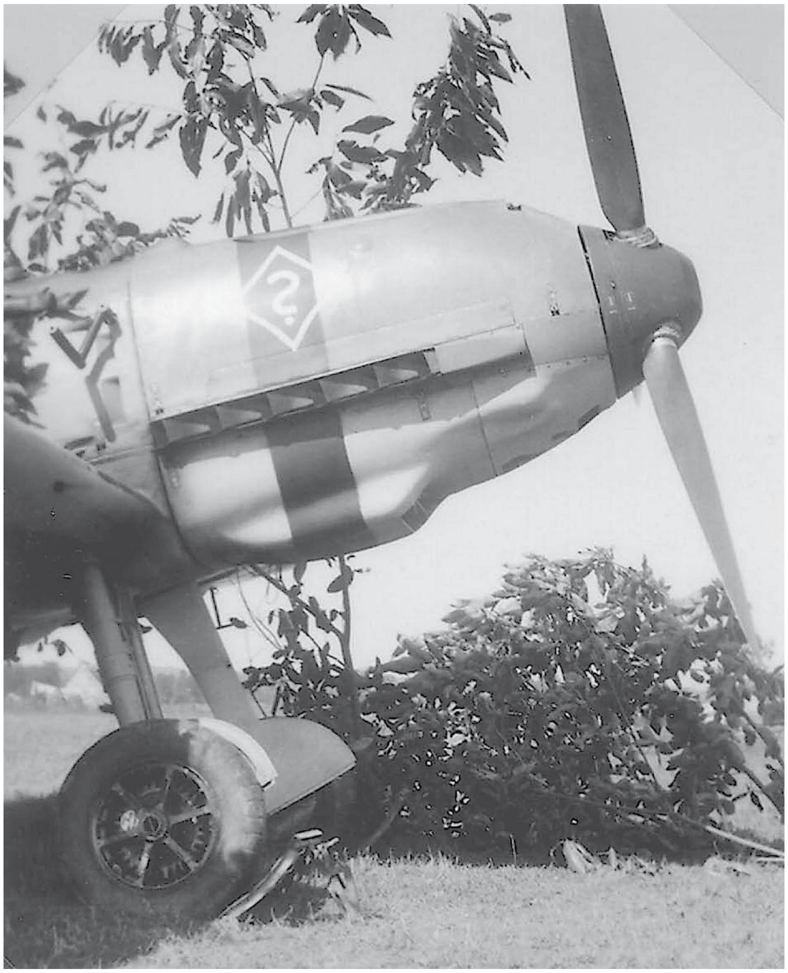


This view of two Bf 109Es of III./JG 53 taxiing out at the start of a sortie at Le Touquet illustrates the obliteration of the swastika emblem from the fins of the unit's aircraft. All of III./JG 53's component *Staffeln* were required to paint a red band around the cowling to obliterate the unit's distinctive *Pik As* emblem in punishment for von Cramon-Taubadel's 'unacceptable' marital situation. However, Hauptmann Wolf-Dietrich Wilcke, in protest, had the swastikas painted out on III./JG 53's Bf 109Es. In this photograph, the aircraft furthest from the camera is Wilcke's aircraft, and the *Pik As* emblem can still be seen on the cowling. The nearest fighter was assigned to *Gruppe* adjutant, Leutnant Erich Schmidt. (1940 History)

Hans-Jürgen von Cramon-Taubadel's marriage in November 1933 to Viola von Kauffmann-Asser, and his own perceived lack of combat success, apparently explains why, in July 1940, the famous JG 53 *Pik As* (Ace of Spades) badge disappeared from the unit's Bf 109Es to be replaced instead by a red band around the engine cowlings. At the time of their marriage, Viola's father Heinrich was serving as German ambassador to Argentina, taking up his post in Buenos Aires in January 1933. However, when the Nazi Party came to power it soon came to their attention that Heinrich was of Jewish descent. In the same month as Viola's marriage to von Cramon-Taubadel, Heinrich was recalled from Argentina and sacked.

It was thus the case that von Cramon-Taubadel's marriage into a Jewish family was held against him, it being suggested that Reichsmarschall Göring was not best pleased that the *Kommodore* of one of his premier *Jagdgeschwadern* was married to a part-Jewish woman. Reportedly, the pilots of JG 53 were told that the *Pik As* badge had to be removed so as not to give the RAF information on such a 'formidable opponent'. None of the pilots believed this story and were convinced instead their insignia was removed as punishment for their *Kommodore* having married a so-called 'non-Aryan' woman. Thus, the unit was to be deprived of any pride or honour in its allocated emblem.

As previously noted, Von Cramon-Taubadel's lack of victories in the Battle of France is said to have further annoyed Göring, and this is sometimes advanced as the reason for his dismissal. However, the *Kommodores* of JG 2, JG 3, JG 26, JG 27, JG 52 and JG 54 all similarly failed to shoot down a single aircraft in May–June 1940. In fact, only Oberst Theo Osterkamp of JG 51 was credited with one confirmed and three unconfirmed victories during the Battle of France.



One of JG 53's Bf 109Es in France during the Battle of Britain. In a show of cheeky bravado, its pilot has painted a white outline for the obliterated *Pik As* emblem onto the red band and then superimposed a question mark. (Chris Goss Collection)

All of this led to III. *Gruppe* of JG 53, in an act of protest, and remaining loyal to von Cramon-Taubadel, to paint over the swastikas on the fins of their Bf 109Es. They would only restore them once the 'red band of shame' had been removed and official permission granted for the unit's aircraft to wear the *Pik As* emblem once more. By the time the insignia returned to the Bf 109s of JG 53, von Cramon-Taubadel was long gone.

Such darkly sinister political shenanigans were of little interest to most pilots belonging to the Bf 109E units now grouped along the north coast of France. Buoyed by their successes in Poland, the Low Countries and France, they were eager and keen to get on with the task in hand over southern England.

CHAPTER 3

PATH TO COMBAT

Contemporaneous accounts by German fighter pilots operating over southern England during 1940 are relatively rare. For one thing, they were either too tired or too busy to spend time writing up diary accounts of aerial battles or of their flying adventures. Of those who survived the war, some would go on to later write of their experiences. However, for those pilots who survived the Battle of Britain, they had yet to survive combat in theatres such as the Eastern Front, North Africa, flying in defence of the Reich and in countering the relentless Allied advance across northwest Europe after June 1944.

The chances of survival were not high, and thus any post-war accounts from Bf 109E pilots who participated in the Battle of Britain very often originate with those who were shot down over England and taken prisoner. An equally revealing source of material may be found in the Air Intelligence A.I.1(k) interrogation summaries of these men compiled after they were captured.

Whilst the notion of whirling, turning, diving and high-energy aerobatic duels of dogfighting Bf 109Es ‘mixing it’ with RAF fighters in thrust-and-parry engagements over southeast England in the heady summer days of 1940 continues to endure, the reality was rather different. Indeed, on the part of the Bf 109E pilots, it was very often a case of 'thrust' but very little 'parry'. And that was especially so during the earlier stages of the Battle of Britain. The reasons for this are easy to identify.

For the most part, the escorting Bf 109s – sometimes *en masse* and involving groups of fighters in entire *Geschwader* or *Gruppe* formations – already had the advantage of height before they even reached the English Channel. To assemble in time to rendezvous with their bomber charges over, say, Cap Gris Nez, the formations would have taken off from their Pas-de-Calais airfields, formed up inland and then circled until in position to provide a protective umbrella over the bomber formations a few thousand feet below them.

During this time, the Chain Home Radio Direction Finding (RDF) stations along England's south coast had likely spotted the formations building, as their range allowed them to 'see' into France for a distance of about 80 miles inland of Calais and up to 15,000ft. This was perfectly adequate to pick up the Luftwaffe formations as they assembled, but the problem was in second-guessing their intentions, likely course across the Channel, bearing and probable target. As the RDF plots were passed up the chain of the RAF's command and control system, it was all a question of timing for the defenders – and not a little guesswork.

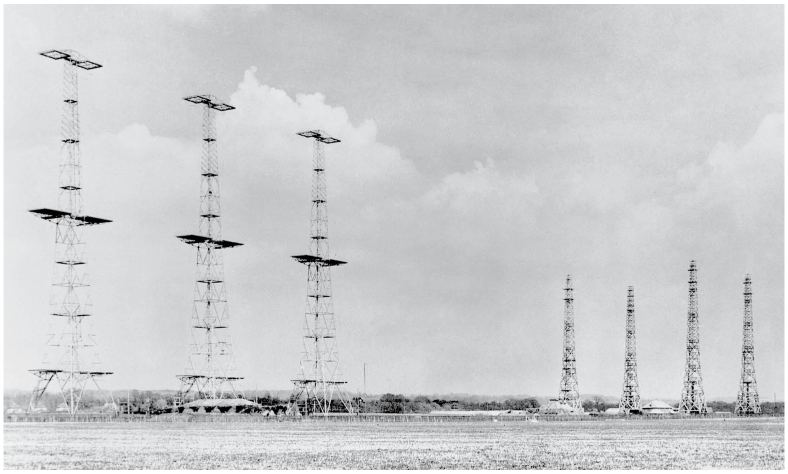
Meanwhile, the advancing phalanx of Bf 109s was very often still in climbing mode as it crossed the English Channel, thus increasing the advantage of height exponentially. That said, this advantage was also being eroded in part as the Bf 109E formations slowed and zig-zagged above the bombers to keep in the optimum position to defend them. In so doing, the fighters' available fuel for any action over England was rapidly depleting.

On the ground, RAF controllers needed to judge the very best moment to scramble their fighters, where to vector them, how many to send and to which height they should climb. This was all a very imprecise science based on a Chain Home RDF system that was far from perfect, and one that sometimes failed to work properly, if at all. A case in point was the Ju 87 attack on Detling, in Kent, on 13 August 1940, when the raid went completely undetected. This resulted in the Stukas, and their fighter escorts, advancing, bombing and retreating from their objective completely unhindered.

However, Chain Home was part of the first integrated air defence command and control system in the world, and it generally worked very well. Chain Home prevented the necessity for RAF Fighter Command to mount permanent standing patrols waiting for unpredicted raids. The latter scenario would have surely resulted in the early defeat of RAF Fighter Command. But Chain Home did have its deficiencies, which were largely because of the technology of the day. And all of this played directly into how the Luftwaffe fielded its Bf 109Es during the battle, and the tactics which thus evolved.

With the RAF's fighters scrambled and climbing to the anticipated interception point, and with a rate of climb of just under 3,000ft per minute for the Spitfire and a little less for the Hurricane, it could take ten to 12 minutes to reach the altitude at which the Bf 109s might be operating. Meanwhile, the enemy formations would have been advancing inexorably towards their objectives, and the Luftwaffe fighter pilots, way above the bombers and the climbing RAF interceptors, very often got an early view of the climbing Spitfires and Hurricanes. Their position was frequently given away by sun glinting off canopies and metalwork as the eagle-eyed Bf 109 pilots looked downwards for their prey.

A *Schwarm* of Bf 109Es from 6./JG 27 fly in typically loose formation as they climb beyond 20,000ft off the Normandy coast prior to flying north over the Channel and heading for England. Their progress would be closely monitored by Chain Home RDF stations. (Tony Holmes Collection)



RDF stations such as this one at Poling, in West Sussex, gave RAF Fighter Command sufficient warning of approaching German bomber formations, and their fighter escorts. However, the plotters monitoring such contacts could never be totally certain as to what areas were being targeted by the Luftwaffe. (Tony Holmes Collection)

Certainly, it was the case that the main objective for the RAF fighters would always be the bomber formations, and although there is a popular notion that 'Hurricanes went for the bombers and Spitfires engaged the fighters', nothing could really be further from the truth – not as a generally set 'rule', in any case. The reality was simply that the intercepting fighters, Spitfires or Hurricanes, engaged whatever it was they were faced with once the enemy was sighted. And both the Spitfire and Hurricane could battle it out with the Bf 109E, albeit that the often-invidious argument of 'which was the better fighter' is not for these pages.

Suffice to say, however, that the Spitfire I had the edge over the Hurricane I in a one-to-one engagement with the Bf 109E. However, *specifically* sending Spitfires after Bf 109s was really neither practical nor possible. And for one very simple reason, as articulated by Kenley Sector Controller Sqn Ldr Anthony Norman, who explained:

> The raid counter would only give me the estimated number of aircraft and their height, but I would have no idea as to aircraft type. The first thing I'd see would be a raid counter appearing on the situation map, but this would only give me the estimated number of aircraft, and their height, but I would have no idea if they were fighters or bombers, or both. So, when I was eventually ordered by No 11 Group to scramble such-and-such squadron, this would be the squadron that had been first called to readiness, and Group would be able to see from their state board which squadron that was.

> It is important, here, to emphasise that it was never the case that Hurricanes were despatched to deal with the bombers and the Spitfires to engage the fighters, although it is often suggested that this is what happened. Actually, that notion is complete rubbish because it was impossible, tactically, as we just didn't know, anyway, how the raid being intercepted was made up. So, at Kenley [in Surrey], we could end up sending No 615 Sqn's Hurricanes against fighters and then No 64 Sqn's Spitfires off after a formation of bombers. It had to be that way because we simply didn't know the raid's composition.

In one of the raids likely plotted by Norman on 12 August 1940, Leutnant Max-Helmuth Ostermann of 7./JG 54 wrote of his first victory over England:

> Once more, I lost contact with my *Staffel*. The whole *Gruppe* had split up into dogfights, and one saw hardly a pair of our aircraft together. The Spitfires showed themselves wonderfully manoeuvrable, their aerobatics display, looping, rolling and opening fire in a climbing roll filling us with amazement. There was a lot of shooting, but not many hits.
>
> In contrast to my combats in France, I was now quite calm. I did no shooting, but kept trying to get into position, while keeping a sharp watch on my tail. Finally, I got into range with a Spitfire. I spotted a comrade below me with a Spitfire on his tail. At once, I flung my machine around and went down after it. Now, I was about 200 yards behind the Tommy. Steady does it – wait! The range was much too far. I crept slowly nearer until I was only 100 yards away and the Spitfire's wings filled my reflector sight. Suddenly, the Tommy opened fire and the Bf 109 in front of him went into a dive. I too had pressed the firing button after previously aiming carefully. I was only in a gentle turn as I did so. The Spitfire at once caught fire, and with a long grey plume of smoke it dived down vertically into the sea.

Future high-scoring ace Leutnant Max-Helmuth Ostermann of 7./JG 54 achieved his first victory over England on 12 August 1940. Having claimed two victories in the Battle of France, he was credited with six kills (all Spitfires) in August–October 1940. Ostermann also force-landed his battle-damaged Bf 109E in France following combat with Spitfires on 1 September. (1940 History)

The Spitfire was Ostermann's first victory over England (having claimed two French fighters in May), and he would go on to score six victories during the Battle of Britain. Although these were yet the relatively early days of the battle, Ostermann spoke wearily of the fatigue, writing:

> Utter exhaustion from the English operations had already set in. For the first time, one heard our pilots talk of prospects of a posting to a quieter sector.

Ostermann was eventually killed in action on the Eastern Front on 9 August 1942, shortly after claiming his 102nd victory.

The following is an account written by another Luftwaffe fighter pilot to a friend after he had taken part in an aerial battle over southern England on 30 August 1940 – an operation flown from his airfield base at Guines in the Pas-de-Calais. It was a sortie comprised entirely of Bf 109Es, a *freie Jagd*, and it was a raid of which Sqn Ldr Norman would have been unable to determine its composition. The account was written by 22-year-old Leutnant Erwin Leykauf of 7./JG 54:

> In general, I don't like to write essays or reports, but since there's only room for one person in a Messerschmitt 109, and a reporter can't fly with me, I will just have to tell you about a frontline experience myself.
>
> Our engines drone evenly in our ascent to altitude, and the aircraft of my *Staffel* are to the left and right of me. The morning haze out over the coast of France is slowly drifting away from under us; 4,000m and then 5,000m is indicated on the pointer of the altimeter. Now, oxygen masks are put on as we go higher and head towards London. A 'Free Hunt' is our mission. This is where we are simply hunting for the enemy, and not tied as escorts to the bombers.
>
> We fly out over the English Channel, and from this altitude it just looks like a wide river. Small clouds cover the white cliffs along the coast of 'Old England' ahead of us. The clouds that form a layer at 2,000–3,000m over southern England are becoming more and more dense. Every hole in the cloud is watched closely because that is where the enemy pop through if they want to engage us.
>
> Above us, a 'cover pack' that comprises two fighters working in a pair watch behind and above us to meet any nasty surprises from those directions. The view is wonderfully clear, and now you can plainly see Canterbury [in Kent]. The anti-aircraft guns will soon start firing. We already know this area well enough.

For Leykauf and his fellow pilots, the knot of fearful anticipation intensified in their stomachs as their formation penetrated further into British airspace. They knew that the enemy would likely be waiting for them. But any fears or tensions would dissipate soon enough when battle was joined, as there would be far too much going on to suffer from nerves. It duly became an all-consuming effort to both hit the enemy and stay alive at the same time. Importantly, it also meant keeping a watch on fuel gauges – a limited fuel capacity restricted how much time the Bf 109s could spend over England.

Feldwebel Erwin Leykauf of 7./JG 54 clambers into the cockpit of his Bf 109E at Guines-South in the Pas-de-Calais in the summer of 1940. (1940 History)

Leykauf continued his account of the battle:

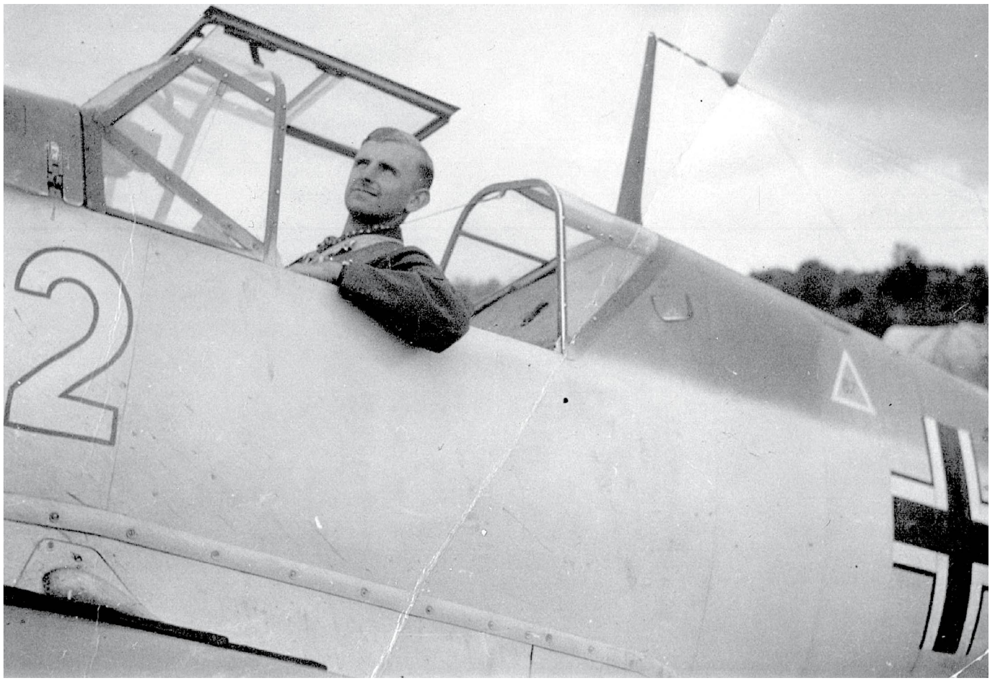
Suddenly, there is a crackle in the headphones: 'Attention! Below us through a hole in the cloud, six or eight machines!' But you hear that often. Sometimes, it was just our own aeroplanes flying back. But this time we know they are not ours. The line formation in which they are flying is suspicious. So . . . we must be careful!

Now, they come higher. And now we can spot them perfectly. The dark silhouettes of the Spitfires stand out clearly against the white cloud cover. Another 1,000m and I guess they will be among us. Apparently, though, they haven't spotted us yet. But . . . damn it! Why, oh why, doesn't our *Staffel* leader attack now? What is he doing? If they notice us, then the chance of surprise is lost for us. We make another tight left climbing turn, but then I realise that our cunning old fox of a leader knows exactly what he is doing after all. I quickly realise that his idea is to make an attack from out of the sun.

Soon, the jittery moments before the dogfight will be over! Let's get this started! I'm flying as the third aircraft behind the leader, and we are now in a nosedive. Let's get started . . . let's get started!

Suddenly, a plume of smoke traces a downward arc, tumbling away into the clouds. The leader of our *Staffel* has taken care of the first one. The next Spitfire is now in front of me. The roundels are tantalisingly bright. Now, release the safety catch and press the buttons. Damn it! The beast has

> spotted me, and he pulls away in a tight curve. At the very same moment, I have another one in front of me, flying in the same direction. I'm already within ramming distance! The pointed wings, the radiators, the roundels . . . my machine guns and cannon hammer them. With thick black smoke, I see the burning Tommy fall into the void below me. That was the fourth of his tribe who made the acquaintance of my faithful '5' [the identification number carried on the fuselage of Leykauf's aircraft]. But what is that thread of smoke just passing my cockpit? Tracers!



Feldwebel Erwin Leykauf photographed in the cockpit of a Bf 109E of 7./JG 54 that shows the unusual position and size of the aircraft numerals used by his *Staffel*. The fighter also has a fuselage cross with unusually small proportions – a feature also seen on other Bf 109Es of this unit. (1940 History)

> At once, everything is in high tension again. I can just see a Tommy behind me, but he is on his back, burning, and disappearing. A few pieces of debris flutter behind him. Then a '109 pulls past, very fast. I wave as I recognise a comrade of my *Staffel*. He has slammed this Tommy off my back. It was all over in a matter of seconds. A look at the instruments, but everything is still in order.
>
> At low-level we roar over our home airfield, waggling our wings. The luck of the hunter has stayed with me. But tomorrow we will do it all again. Will we all come home?

Erwin Leykauf was one of the lucky ones, for he did come home the next day. Indeed, he survived the war with an impressive victory tally, having claimed five kills in 1940. Awarded the German Cross in Gold in 1942, Leykauf was credited with 33 confirmed victories, 27 of them being achieved on the Eastern Front.

As stated earlier, Leykauf's testimony is one of the relatively few surviving detailed accounts of aerial combat over England in the Bf 109E during the Battle of Britain. And, unlike Leykauf, German pilots did not always enjoy the upper hand when it came to altitude. A case in point was an action involving Hauptmann Hans Asmus. Writing about an incident an action took place on 25 October 1940, Asmus described a brief engagement that saw the RAF fighters enjoy a rare altitude advantage:

> I was flying with the *Geschwaderstab* of JG 51 on my second mission that day. I think it was about noon. Prior to my transfer to JG 51, I had commanded a tactical reconnaissance squadron from 1938 to 1 August 1940. After a short conversion course of about four weeks on the Bf 109, I asked my old friend Werner Mölders for a transfer to the *Geschwaderstab* of JG 51 to get some experience and action.
>
> On this day, I was flying Mölders' Bf 109E fitted with a DB 601N engine – a motor with a higher compression rating and about 100hp more power than a standard DB 601. Mölders was flying in the first of the new Bf 109Fs, and his No 2 was his usual trusted wingman (or Katschmarek), Leutnant Irwin Fleig. The three of us were about to attack 15 Spitfires [these were probably Hurricanes of No 501 Sqn] in close formation 1,500ft lower than us and on the opposite heading. We were at an altitude of approximately 30,000ft when he went into a wide left turn to prepare our attack on the Spitfires. Unfortunately, we then discovered that the squadron we were about to attack was covered by another full squadron of Spitfires.

On 25 October 1940, Major Werner Mölders is known to have flown one of the first Bf 109Fs in an operational sortie over southern England. Although it would come properly into service from 1941 onwards, the type was rarely seen in action over Britain. (1940 History)

Much to my surprise, I found they were flying some 2,500ft higher than us. Prior to this, we had not encountered any aircraft of the RAF that could beat our ceiling of more-or-less 30,000ft. In retrospect, I concluded that just as we were using the Bf 109F for the first time, so a new model or series of the Spitfire with an improved boosted engine performance was put into operation for the first time that day. Anyway, I could not keep up in my Bf 109E with the faster Bf 109F of Mölders, and found myself in a most unhealthy tactical position versus 15 Spitfires that were higher than me and on my tail. I had to get away.

I put the nose of my aircraft down and dived away from them on an easterly heading. I then saw a battle formation of about eight friendly *Jabo* [Bf 109E fighter-bomber] aircraft at about 20,000ft. I recovered my aircraft below them and then turned to join them on a westerly heading, deciding to fly the rest of the mission with them. Flying singly was not the right way to operate if you wanted a reasonable degree of survivability!

I had not yet joined this formation, and still had the Spitfires on my tail, but I can only imagine that the *Jabo* formation of Bf 109s above that I had intended to join released their 250kg bombs, and that one of them hit my aircraft. I can think of no other explanation for what happened to me, because when I came back to semi-consciousness, there was not much left of my aircraft around

> me. But I was still sitting on my seat and falling through the air. I just had enough time to unfasten my belt so that the bucket seat fell off me, allowing me to open the parachute.
>
> I came properly back to consciousness in the general hospital at Maidstone. I had a skull wound, and I was told later that I had a skull fracture, with the usual attendant retrograde amnesia. I would like to say that I was given first class surgical treatment at the Maidstone hospital. And it was here that I experienced my first interrogation. The RAF officer who tried to question me gave me the impression he had not the slightest idea what happened to my aircraft, which he said was found in smithereens scattered over a major portion of the county of Kent around the village of Marden.

Asmus believing that he must have been hit by a *Jabo* bomb falling from above is understandable for a confused pilot trying to make sense of why his aircraft had so suddenly and spectacularly disintegrated the way it had. In fact, he had been hit by a Hurricane of No 501 Sqn, and a combat report filed by a RAF fighter pilot provides the answer.

Flying Hurricane I N2438, Plt Off Vivian Snell found a solitary Bf 109E in his sights and briefly thumbed the gun button. Instantly, the Messerschmitt exploded and fell to pieces before the eyes of a surprised Snell, although he had but seconds to savour his very first success in aerial combat. Moments later, he too was hit and forced to bail out over Cranbrook, in Kent, possibly struck down by the formation of eight Bf 109Es that Asmus had desperately been endeavouring to join.

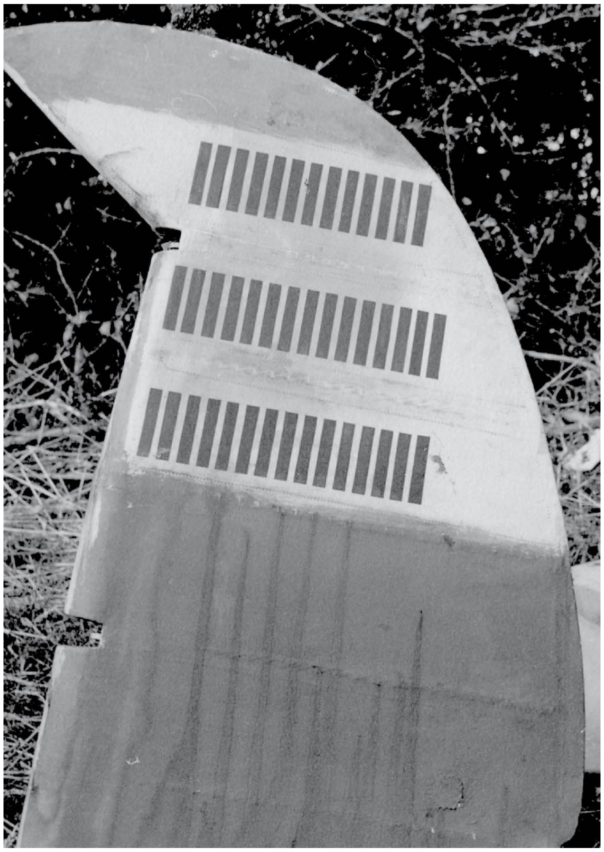
Novice *Jagdflieger* Hauptmann Hans Asmus was shot down over Kent on 25 October 1940 whilst at the controls of Major Werner Mölders' Bf 109E-4 Wk-Nr 3737. (1940 History)

It was an incident which demonstrated that the Bf 109E in 1940 did not always hold the advantage of height. Nevertheless, in the case of the demise of Hauptmann Hans Asmus, it was probably his lack of experience as a fighter pilot that was doubtless a factor in what happened. Despite his rank, Asmus was a singularly inexperienced fighter pilot, and probably rather out of his depth. Nevertheless, RAF investigators were initially convinced that Asmus was a significant ranking fighter ace who, for some inexplicable reason, they had not yet heard of ! The reason for their discombobulation was simple – Asmus had been flying Major Werner Mölders' Bf 109E, and crash investigators discovered a mangled rudder bearing no fewer than a countable 49 victory bars painted on its fabric. It was an impressive score, but they were, of course, the victories attributed to Mölders.

For the most part, as we have seen, combat over Britain in the Bf 109E was a very brief affair, and it often involved 'bouncing' RAF fighters – a method of attack that came from an advantageous altitude, unseen, and out of the sun. This is a scenario which was repeated over and over. One RAF pilot, Sgt Tony

Pickering, knew only too well how sudden and devastating an attack by a fast Bf 109E coming down unseen out of the sun could really be. It truly was 'Beware of the Hun in the sun!'

On 17 September 1940, the Hurricanes of No 501 Sqn had been bounced, unseen, and the formation had scattered. After a brief melee, Sgt Pickering became separated from the others, but then found himself flying next to his pal, Sgt Eddie Egan. Hearing a call to re-muster at 13,000ft, the pair began to climb back to find the squadron. Suddenly, white tracer streaked past them and, in that instant, Egan's Hurricane, wreathed in flames, tilted earthwards in a vertical dive. He did not bail out.



The rudder from Mölders' Bf 109E-4 Wk-Nr 3737, which has been removed for servicing or repair when his tally of victories stood at 44. It was this rudder (recorded by the RAF as having been marked with 49 kills) that was discovered with the wreckage of Wk-Nr 3737 after it was shot down over England on 25 October 1940. (1940 History)

Pickering whipped around to search for his attacker, but there was nothing to be seen. Having picked off his victim, the unseen Bf 109E pilot was racing for France, and home. It was over in seconds – a terrifying illustration of how brutally effective these diving attacks from out of the sun could be.

Of course, once the Bf 109s had scythed through the often-unsuspecting fighter formations, and probably despatched or at least damaged some of the defenders, the surviving RAF fighters would almost always have broken up as a cohesive formation. Individual tail chases might then have developed as the Spitfires or Hurricanes latched onto the tails of the Bf 109s after they had torn through the squadron. Only then would twisting and turning dogfighting take place in situations which might now give brief advantage to the defenders. Suddenly, the Bf 109s could be *below* the RAF fighters, and now placed at a tactical disadvantage until they could perhaps climb again and get up-sun. But for Pickering and Egan, and many others like them, it was all over before they knew what was happening.

For Bf 109E pilots, they were at their most vulnerable whilst climbing back up to altitude after diving through RAF formations, for they were now exposed to attack from those they had just bounced. However, in the grand scheme of things, and if the Bf 109E formations were there to provide direct cover to bomber formations, then they had at least served their purpose. In other words, if they had come down on the defenders before the RAF fighters had reached the bombers, and had thus kept the Spitfires and Hurricanes busy and distracted, and away from the Dorniers, Heinkels or Junkers, then their job was done.

For their part, the RAF defenders' main objective was simply to get at the bombers. Mixing it with the fighters was of no real benefit in terms of defending Britain from air attack. And it was often going to be an unequal contest in any case, thanks to the height advantage held by the Bf 109Es.

CHAPTER 4

WEAPON OF WAR

When World War I ace Ernst Udet made a private visit to Willy Messerschmitt at the Bayerische Flugzeug Werk in August 1935, the prototype Bf 109 V1 was shown to him, and he scathingly remarked, 'This machine will never make a fighter!' Perhaps, in part, Udet's reaction was driven by the still prevalent view that a fighter had to have an open cockpit, fixed undercarriage and be of biplane construction. In this respect, Willy Messerschmitt's design more than bucked the trend. In fact, it was revolutionary.

In the context of this book, however, it is probably permissible to say that 'the rest is history' and then skip straight to the summer of 1940. Much happened 'twixt 1935 and 1940, of course, in terms of the development path of the Bf 109, and, in many respects, it was certainly an aircraft that was ahead of its time.

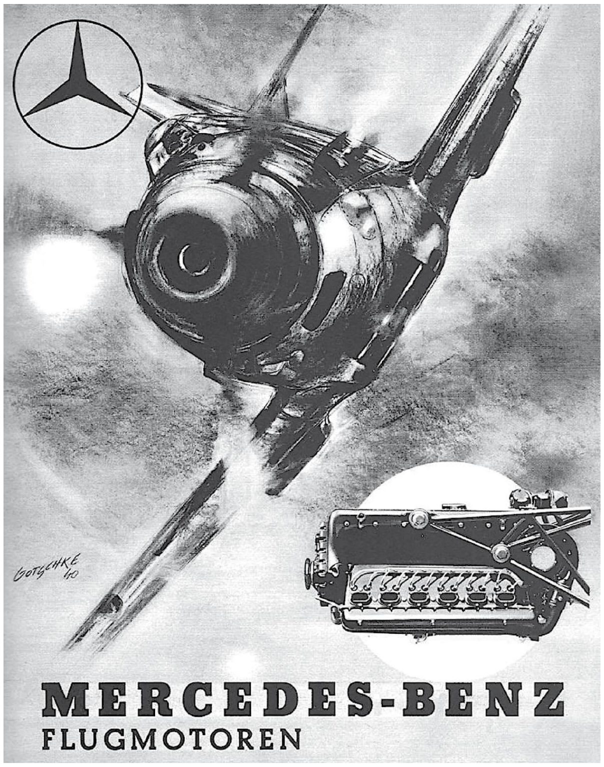
By the end of 1937, the early variants of the Bf 109 had seen action with the *Legion Condor*, and as previously noted, Oberleutnant Gunther Lützow had claimed 'first blood' for the aircraft while serving with *Jagdgruppe* 88 in Spain when he shot down an I-15 on 6 April that year. Already, the words of

Udet just two years earlier were ringing hollow. As an effective fighter, the Messerschmitt had arrived, and through the passage of a metamorphosis born out of experience and knowledge gained in operational service and in action, it evolved through to the Bf 109E of the Battle of Britain.

Gunther Lützow, meanwhile, helped develop and evolve fighting tactics in the Bf 109, also going on to serve in the Battle of Britain and beyond in a career that saw him become one of the leading exponents of flying and fighting in the Bf 109 right up until his death in action on 24 April 1945 while flying an Me 262. But it is to the aircraft itself to which we turn for this chapter.

The overall impression presented by the Bf 109E was of an aircraft that had been compromised by the need for heavier armament and increased engine power to keep in step with fighter development in France and Britain. The design as envisaged in the spring of 1934 was essentially a lightweight high-performance point-defence fighter fitted with the traditional fuselage-mounted armament of two rifle calibre machine guns and the possibility of a third gun firing through the propeller spinner.

The French development of the 20mm Hispano-Suiza cannon, and the British adoption of an 'anti-bomber' armament of eight 0.303-in. machine guns rendered the Messerschmitt's armament patently inadequate. Whilst the design and performance of the Bf 109 were streets ahead of the Heinkel He 51 biplane it was intended to replace, the aircraft's armament had really seen no improvement over the outdated biplane design.



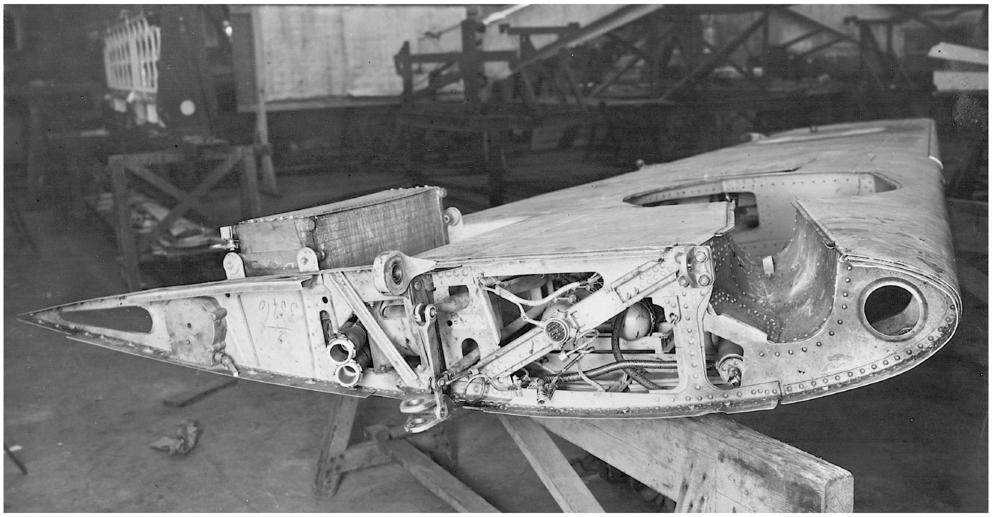
This 1940 advert extolls the virtue of the Bf 109E and its DB 601 engine in dramatic fashion. The aperture in the propeller hub intended for the centrally mounted 20mm cannon is very prominent from this angle. Messerschmitt's attempts to successfully fit the MG FF in the 'V' block of the inverted Daimler-Benz engine met with little success in the Bf 109E, however. (1940 History)

Attempts to fit a 20mm cannon in the fuselage position, mounted between the 'V' block of the engine and firing through the spinner, were not to meet with any success until the advent of the Bf 109F series of late 1940. However, the Bf 109E of the Battle of Britain era is often incorrectly portrayed by artists, and described by some writers, as having a centre-mounted single MG FF 20mm cannon firing through the propeller hub. With the Bf 109E, that was never the case, although the configuration of the propeller spinner with its aperture has often led to that incorrect assumption.

The retrofit of a single 7.92mm MG 17 machine gun in each wing compromised the strength of the single main spar. Its structural integrity was affected further by the insertion of coolant radiators following the adoption of the Daimler-Benz DB 601A engine for the Bf 109E, coupled with, from the E-3 subtype onwards, enlarged wing cavities for MG FF 20mm cannon and their bulky 60-round magazines. The inboard wing was correspondingly reinforced in its strength by 12-gauge skinning, but the structural weaknesses were never totally made good. Limitations in respect to maximum indicated airspeed in the dive were set out in the pilot's notes, with special emphasis placed on monitoring the application of rolling G forces.

While the Bf 109E was to remain structurally sound during all normal manoeuvres, provided that the pilot flew within its limits, there was no doubt that the aircraft had to be handled with a degree of circumspection that was not encountered with the Spitfire and Hurricane. In addition to the wing issues, the undercarriage – although of wider track than that fitted to the Spitfire – suffered from greater torsional loads in crosswinds. As a consequence, there were a great many landing and ground handling accidents involving the Bf 109E.

The primary versions of the Bf 109 to have served in the Battle of Britain were the E-1, E-3 and E-4. The very fact that there were three main sub-types operating throughout the campaign is indicative of how Germany developed and improved the fighter while it was in operational service. And they had been doing this since the type first went into action in Spain. Apart from the advent of three-bladed variable pitch propellers, all-metal wings replacing fabric wings on the Hurricane and the introduction of the slightly improved Rolls-Royce Merlin III in place of the earlier Merlin II, the Spitfire I and Hurricane I pretty much stayed the same from service entry through to the end of the Battle of Britain. Only the introduction of the Spitfire IIA later in 1940 would give some margin of improvement.

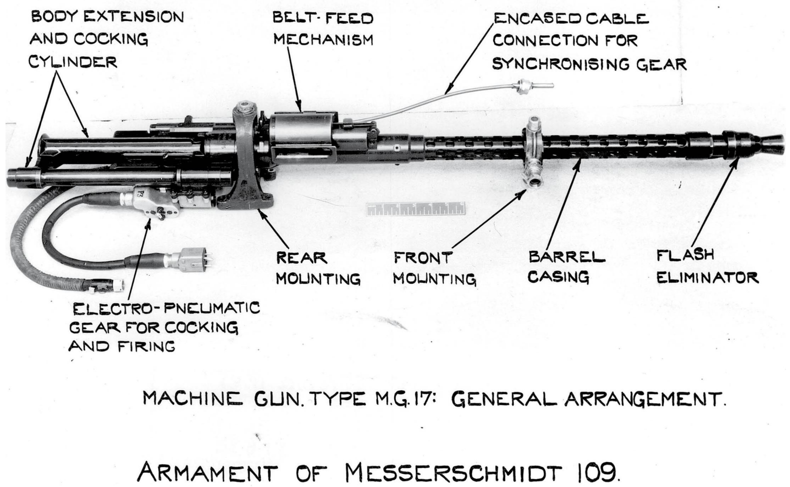


Technical aspects of the Bf 109E were always of great interest to the RAF, not least of all the aircraft's wing with its automatic leading-edge slats. The pencilled number visible on the wing root confirms that this was the starboard wing of Bf 109E-1 Wk-Nr 3326, which was the first intact example of the Messerschmitt fighter to fall into Allied hands in World War II. On 28 September 1939, its pilot, Unteroffizier Georg Pavenzinger of 2./JG 51, became lost and was forced to land at Geurdertheim, just nine miles west of the German border, when he ran low on fuel. Both he and his fighter were captured by French troops. Given that the wing has an RAF roundel, it is assumed it had been fitted as a replacement to Wk-Nr 1304. (1940 History)

The whole point of the Bf 109 evolutionary path, though, was that it had been driven and informed by experience in action – just as the Luftwaffe's development of fighting tactics were. It was no coincidence, then, that the RAF went into action using outmoded textbook tactics and with aircraft that were much the same as the first versions that had left the production lines. There had been no 'testing' of either aircraft or tactics until battle was finally joined in 1940. Perhaps this was partly what led Air Chief Marshal Sir Hugh Dowding to declare in September 1942 that the Spitfire had been 'moribund' since the middle of the Battle of Britain.

Luftwaffe development of the Bf 109E sub-types, however, did not stop with the E-4, and by August 1940 the E-7 was entering into service as a *Jabo* fighter-bomber through the fitment of an ETC 500 bomb rack on the fuselage centreline.

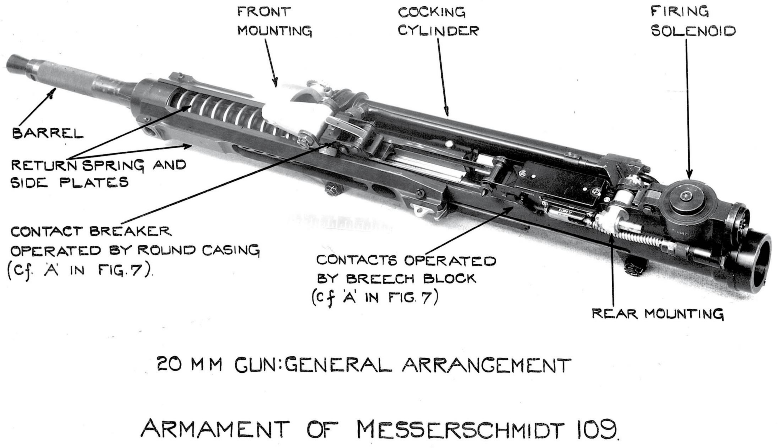
For all these developmental tweaks, however, there were issues that were fundamental for the operation of the Bf 109E over Britain that were not addressed. Chief among these failings was range, and the failure to equip the aircraft with drop tanks. By the time this problem was finally sorted out, it was far too late for the fighter to make any appreciable difference to the outcome of the Battle of Britain. This is a subject which is dealt with later on in this volume.


BODY EXTENSION AND COCKING CYLINDER
BELT-FEED MECHANISM
ENCASED CABLE CONNECTION FOR SYNCHRONISING GEAR
REAR MOUNTING
FRONT MOUNTING
BARREL CASING
FLASH ELIMINATOR
ELECTRO-PNEUMATIC GEAR FOR COCKING AND FIRING
MACHINE GUN. TYPE M.G.17: GENERAL ARRANGEMENT.
ARMAMENT OF MESSERSCHMIDT 109.

This photograph of an MG 17 machine gun from a Bf 109E was taken by British technical intelligence officers to illustrate the salient points of the 7.92mm weapon as installed in all variants of the E-model in 1940. The Bf 109E-1 had four of these belt-fed guns, two above the engine and one in each wing. Note that the contemporary annotation has incorrectly spelt the name Messerschmitt. (1940 History)

Also, and although more of a personal equipment matter than being aircraft-related, the failure of the Luftwaffe to issue one-man dinghies to Bf 109E pilots was a serious oversight for operations being conducted in 1940 across the English Channel. Not only that, but there were problems in relation to the issue of lifejackets, too. And whilst such things might be considered a little esoteric in terms of their relationship to the Bf 109E as a weapon of war, they were important matters, nonetheless.

Interviewed in the late 1970s, *Legion Condor* ace Hauptmann Joachim-Heinrich Schlichting had served as *Gruppenkommandeur* of III./JG 27 during the summer of 1940, and he complained that his unit had not been equipped with adequate lifejackets up to the point when he was downed over Shoeburyness, in Essex, by Spitfire ace Flt Lt Norman Ryder of No 41 Sqn on 6 September. Instead, they had to rely on what he described as car inner tubes for extra flotation in the event of coming down in the English Channel. It seems an extraordinary claim, and almost an unlikely one. But evidence of just that – a tyre inner tube – was found during 1977 in the recovered wreck of Bf 109E-4 Wk-Nr 1574 flown by Oberleutnant Ekkehard Schelcher of *Stab* III./JG 54. It is evidenced, too, by a photograph of a Luftwaffe airman wading ashore on the French coast in 1940 clutching an inner tube.

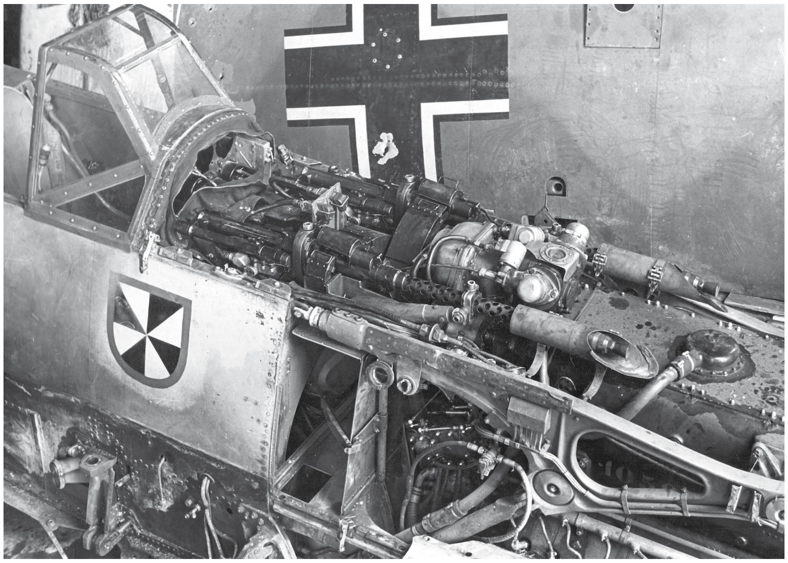

FRONT MOUNTING
COCKING CYLINDER
FIRING SOLENOID
BARREL
RETURN SPRING AND SIDE PLATES
CONTACT BREAKER OPERATED BY ROUND CASING (cf. 'A' IN FIG.7).
CONTACTS OPERATED BY BREECH BLOCK (cf 'A' IN FIG 7)
REAR MOUNTING
20 MM GUN:GENERAL ARRANGEMENT
ARMAMENT OF MESSERSCHMIDT 109.

The 20mm MG FF cannon was wing mounted in the Bf 109E-3, E-4 and E-7 variants, all of which retained the two MG 17s above the engine. The Bf 109E-4 used the upgraded MG FF/M model firing the improved *Minengeschoss* (or mine-shell), which packed a larger explosive charge. The new shell required modifications to the MG FF's mechanism due to different recoil characteristics, hence the MG FF/M designation. Again, this is a British technical photograph with the name Messerschmitt spelt incorrectly. (1940 History)

Almost certainly, however, when he mentioned 'inadequate lifejackets', Schlichting was referring to the kapok-filled lifejackets supplied to bomber and fighter crews during the early part of the war. Officially, this was the Model 10-76A *Schwimmweste*, but it is often referred to, colloquially, as the 'sausage' lifejacket. The kapok was stitched into tubular pockets which gave the appearance of strings of sausages sewn together, hence its nickname. This pattern of lifejacket, though, had both benefits and drawbacks.

The main benefit was that the kapok jacket needed no inflation. Once the wearer was in the water, the kapok instantly kept the man afloat. On the other hand, it was cumbersome, bulky and awkward in the confined cockpit of the Bf 109. But it had another drawback, too. Once submerged in water for any length of time, the kapok became waterlogged and lost all of its qualities of buoyancy, thus causing the wearer to sink.

The alternative lifejacket, once they were issued to all Luftwaffe aircrew members, was the automatically inflating Model 10-30 *Schwimmweste*. These were rubber bladder devices inside a rubberised yellow fabric, and they were blown up by a CO_2 inflation cylinder. It was then possible to keep the jacket topped-up with air through an inflation tube. The 10-30 was a superior device to the kapok *Schwimmweste*, and many RAF pilots discarded their own issue Air Ministry lifejackets in favour of it if they could lay their hands on captured examples. Nevertheless, some Luftwaffe pilots were extremely wary of inflatable jackets. After all, they could easily become punctured by splinters, or have holes burned in them. And even if only for a limited period of time in the water, the Kapok 10-76A would initially float no matter what.

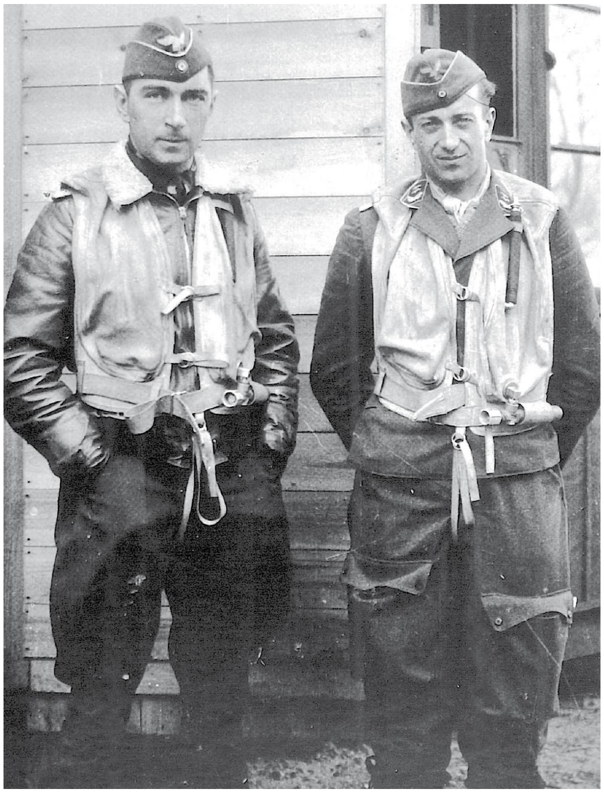


This view of a Bf 109E-4 at the Royal Aircraft Establishment in Farnborough illustrates the compact DB 601 engine unit which could be removed and replaced as required with remarkable simplicity. Also shown are the engine-mounted 7.92mm MG 17 machine guns, the port one set slightly further forward than its pair. This aircraft is Wk-Nr 1480 of *Stab* II./JG 3, flown by Oberleutnant Franz von Werra, who was shot down west of Staplehurst, in Kent, and taken prisoner on 5 September 1940. (1940 History)

In many ways, and just as it was in the case of drop tanks, the Luftwaffe made a number of fundamental errors during its 1940 *Schlact um England.* And the lifejacket and dinghy issues, insofar as they impacted the Bf 109E pilots, should certainly be included amongst them. Yet, on the other hand, the Luftwaffe's organisation and logistics were otherwise astonishingly good during the 1940 campaign.

For example, and as a counterpoint to the complaint about dinghies and lifejackets, the extremely efficient *Seenotdienst* air-sea rescue service was already in place on the English Channel coast by July 1940. Throughout the Battle of Britain, the organisation rescued a good many Bf 109E pilots from what would otherwise have been a watery grave. Not only that, but pilots were also issued with packets of vivid fluorescein dye that coloured the water around them bright green and made them easier to spot from the air. Interestingly, we know that high-scoring ace Major Helmut Wick, *Kommodore* of JG 2, favoured the Kapok Model 10-76A *Schwimmweste*, and he was probably wearing one at the time of his death on 28 November 1940. Wick also wore it with the fluorescein dye packet, which can be seen in photographs of him during the summer of that year.

These examples are almost contradictory in terms of their efficiency and brilliance to an otherwise lacklustre organisational and logistical performance with dinghies, lifejackets and drop tanks! As stated above, all these issues were fundamental to how the Bf 109E was operated as a weapon of war in 1940, especially over wide stretches of sea.

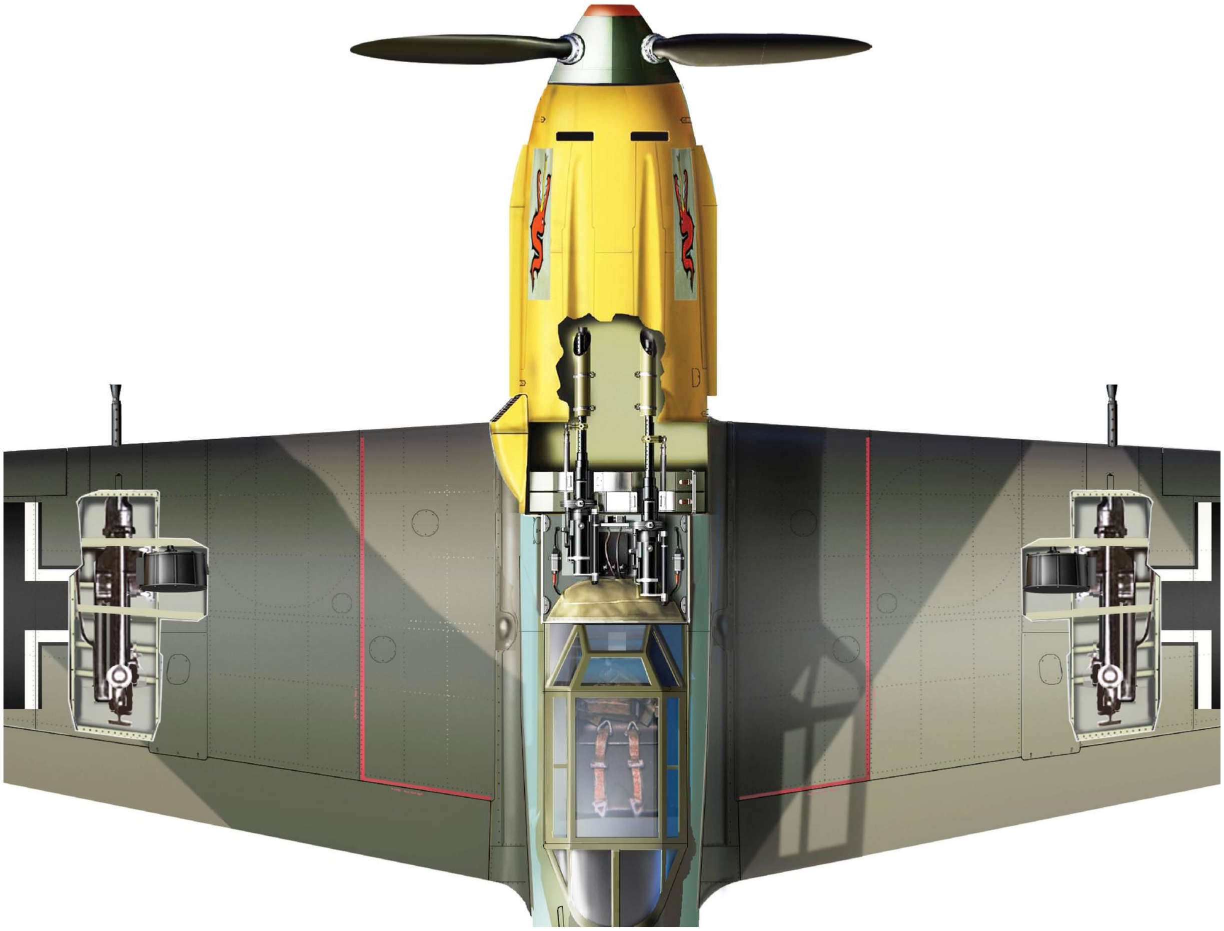


Major Werner Mölders and his wingman, Oberleutnant Hartmann Grasser, have each donned their Model 10-30 *Schwimmweste* in preparation for another cross-Channel foray during the Battle of Britain. The connector for the CO_2 inflation cylinder is clearly visible at the bottom of both *Schwimmweste*, as is the oral inflation tube at top right on Grasser's Model 10-30. They would each claim more than 100 victories flying the Bf 109, although only Grasser would survive the war. (Tony Holmes Collection)

Returning to the aircraft itself, the standard powerplant for all Bf 109E variants was the Daimler-Benz DB 601A (or Aa, with modified supercharger, followed by the similarly equipped N), an inverted 12-cylinder engine rated at 1,085hp at 4,500m. The powerplant was fitted with a Bosch PZ12 fuel injector, which gave the DB 601 the advantage of direct fuel injection over the gravity-fed SU carburettors of the Merlin III. The Daimler-Benz engine ran normally under negative-g conditions, which allowed the Bf 109E to be pushed into an immediate bunt downwards without the engine cutting out.

Until the problem was later resolved with the carburation of Spitfire and Hurricane engines, this feature allowed a Bf 109E pilot to quickly escape, downhill, from any pursuing RAF fighter. Indeed, it was his best chance of getting away, for his opponent had to roll inverted to ensure his engine did not cut out when he dived in pursuit. In doing so, the RAF pilot would routinely lose sight of his quarry. Furthermore, it is often suggested that a burst of black exhaust smoke from the Bf 109E as the pilot opened his throttle and made a sudden dive gave rise to many RAF fighter pilots believing they had hit, damaged or even destroyed the fighter they were engaging. Very often, that was not the case at all.

Direct fuel injection in the Bf 109E certainly gave a significant advantage over the opposition, and it is almost tempting to wonder if designers in Germany had somehow been privy to the correspondence of Air Chief Marshal Sir John Salmond, then Chief of the Air Staff, from 22 February 1932, which opined, 'Direct injection of petrol may prove to be an important step forward in the future. The carburettor is at best an amateur's method of mixing air with vapourised fuel.' It was a prescient statement, but unfortunately British aero engine designers nevertheless continued down the 'amateur' route. Designers in Germany, however, were to take that 'important step forward'.



Bf 109E-4 ARMAMENT

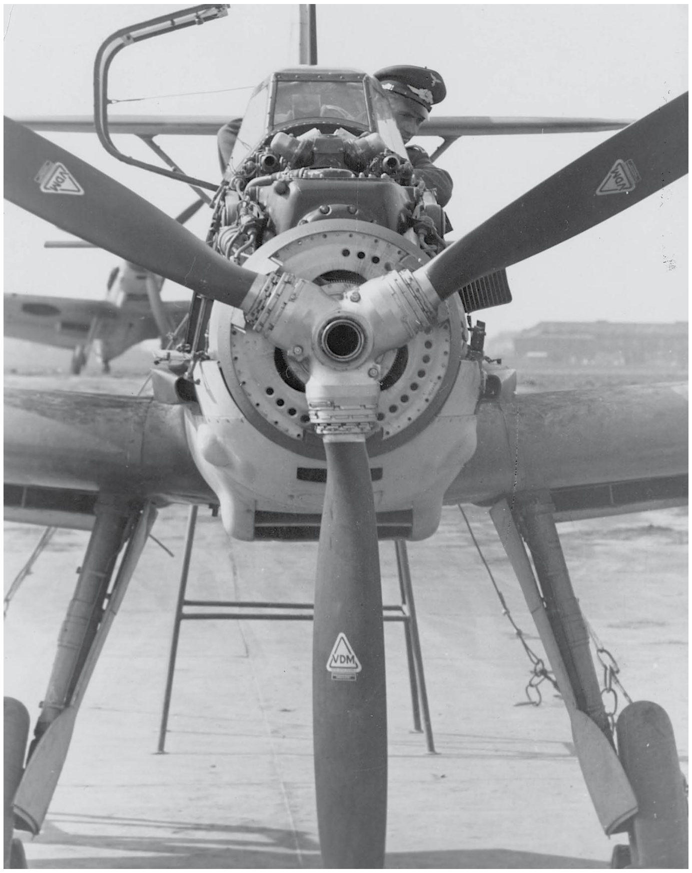
As with the E-1, E-2 and E-3 variants of the Bf 109, the E-4 also carried a pair of Rheinmetall MG 17 7.92mm machine guns mounted above the engine. These fired from troughs in the top of the cowling and through the propeller arc. The weapons were electrically fired via an electro-pneumatic system and drum fed from magazines situated immediately behind the engine and directly in front of the cockpit. These could be removed for replenishment via a hatch on the starboard side of the fuselage, each magazine holding approximately 1,000 rounds. The port gun was set slightly further forward than the starboard weapon. Like the E-3, the E-4 also carried a single 20mm cannon in each wing. The E-3 was fitted with Oerlikon MG FF cannon, whilst the Bf 109E-4 used the slightly upgraded MG FF/M model firing the improved Minengeschoss (mine-shell) that packed a larger explosive charge than a standard round. The cannon barrels and muzzles extended beyond the leading edge of the wing. Each MG FF/M had 60 rounds per gun, and they were drum fed. A bulged fairing on the underside of the wing was necessary to accommodate the bulky steel drum.

The DB 601 engine, too, was also quite revolutionary for its day, being supercharged by a variable-speed centrifugal single stage unit with a system of automatic boost control to ensure suitable manifold pressure was available at all achievable altitudes. Typical of most high-performance continental aero engines at the time, it was a slow-revving large-capacity motor – 33.9 litres (significantly greater than the higher-speed 27-litre Merlin III) with a bore of 150mm and stroke of 160mm.

The DB 601 was also inverted, which meant that the oil was not in the bottom of the sump as it was with the Merlin when the aircraft sat on the ground. Instead, it drained to the cam shaft covers and that part of the engine. Therefore, unlike the Merlin, the cam shafts and ancillaries were ready-lubricated on start-up, whereas it took time for oil to be pumped to those parts of the Merlin when the engine was fired up.

The DB 601A was also a clean-looking and compact engine, with all of its accessories either driven from the rear auxiliary gearbox or situated between the ‘V’ of the cylinders. By doing this, its cross-sectional profile was small, and significantly less than that of the Merlin at the top of the engine.

Another innovation were the simple engine bearers created by Messerschmitt – a pair of forged magnesium alloy beams supported by steel tubular compression struts. With just four attachment points to undo (plus a few pipes and control lines), groundcrew could rapidly remove a DB 601 as a complete unit along with its bearers, coolant header tank and sundry other accessories. This could easily be achieved in the field, whereas a Merlin could take many hours to change – units operating from improvised airstrips during the Battle of Britain were greatly appreciative of this fact. Underlying the efficiency of Daimler-Benz engineering, it is interesting to note that the number of parts in a DB 601A engine was roughly half that found in the Merlin.

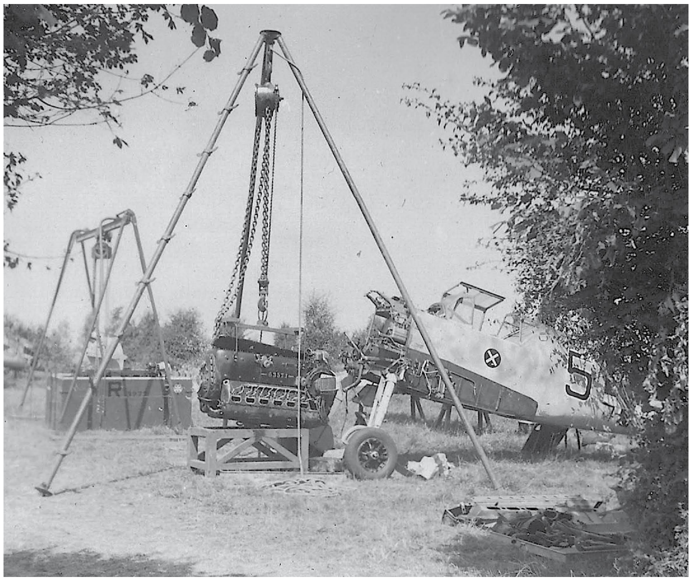


This head-on view of a Bf 109E lacking its engine cowlings and with its tail on a trestle gives a good illustration of its narrow track undercarriage. It was a configuration which led to many ground handling accidents, especially among less experienced pilots. In this view, the spinner cone has been removed and the aperture through which it was originally intended that an MG FF 20mm cannon would fire is clearly visible. The muzzles of the two 7.92mm MG 17 machine guns can be seen atop the DB 601 engine. (1940 History)

Returning to the flying aspects of the aircraft, the maximum true airspeed of the Bf 109E-1/3 was indicated in the official *D. Luft. T* handbook at 458km/h at sea level, increasing to 555km/h at 5,000m. The operational ceiling was given as 10,290m maximum.

The Bf 109E's wing loading, and therefore its handling characteristics and some performance attributes, can be considered high for a fighter of 1940. The example captured by the French and handed to Britain was duly evaluated by M. B. Morgan and D. E. Morris of the Royal Aircraft Establishment. They concluded as follows:

> The take-off run is fairly straightforward. Landing is difficult until the pilot gets used to the aircraft. Longitudinally, the aircraft is too stable for a fighter. There is a large change of directional trim with speed. No rudder trim is fitted: the lack of this is severely felt at a high IAS [indicated airspeed] and limits the pilot's ability to turn to the left when diving. The fin area and dihedral are adequate. The stall is not violent, and there is no tendency to spin. The CLmax [maximum coefficient of lift] is 1.4 (flaps up) and 1.9 (flaps down). No vibration or snaking develops in a high-speed dive. Aileron snatching occurs as the slats open. All the controls are far too heavy at a high IAS. Aerobatics are difficult.



The ease with which the DB 601 engine installation in the field could be carried out is shown to advantage here as 'Black 5' of LG 2 has its engine removed via sheerlegs and pulley while the replacement powerplant waits to be unpacked from its transit crate in the background. This photograph was probably taken at Calais–Marck. (1940 History)

> The Messerschmitt 109E-3 is inferior to the Hurricane and Spitfire as a fighter. Its manoeuvrability at high speed is severely curtailed by the heaviness of the controls, while its high

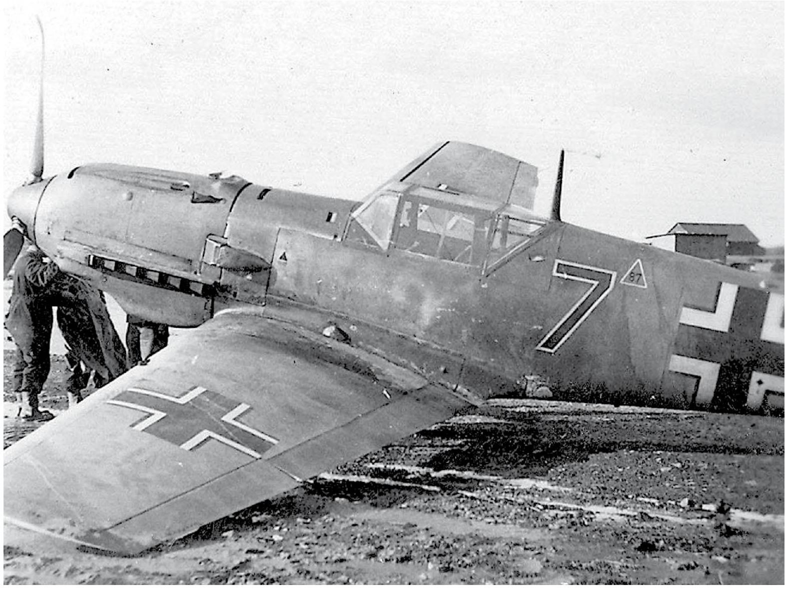
> wing loading causes it to stall readily under high normal accelerations and results in a poor turning circle.
>
> At 400mph IAS [644km/h] a pilot, exerting all his strength, can apply only one-fifth aileron, thereby banking through 45° in about four seconds. The minimum radius of turn without height loss at 12,000ft [3,650m] at full throttle is calculated at 885ft [270m] for the Messerschmitt 109E and 696ft [212 m] for the Spitfire. The cockpit is too cramped for comfort.

It was hardly a ringing endorsement of Willy Messerschmitt's fighter. Despite those somewhat negative views, RAF pilots engaged in combat with the Bf 109E found little evidence to support any assertion the German fighter was inferior to the Hurricane or Spitfire. Both British fighters were light on the controls in the low and medium speed regimes, but in common with the Bf 109E, they too were extremely hard to manoeuvre during high IAS dives. The Spitfire's roll rate to the right, for example, was very low, and it was only improved in 1941 after pressure from operational squadrons brought in metal-skinned ailerons.

When the Bf 109E was test-flown by RAF pilots, it was found that the aircraft's poor pitch control at high IAS was particularly alarming in a dive at more than 400mph. In these situations, backwards force of the control column brought the nose up only very slowly, with the pilot being unable to apply sufficient G to even 'grey out'.

At least one of these test flights saw Wg Cdr George Stainforth, who had been part of the RAF's Schneider Trophy winning team of 1931, testing the Bf 109E with the Air Fighting Development Unit in comparative dives, level flight, climbs and mock attacks against Spitfire I P9434 flown by ace Flt Lt Robert Tuck from Farnborough, in Hampshire, on 8 June 1940. It is quite likely that some of the content of the report by Morgan and Morris was informed by these trials, and although Tuck later seems to have claimed that he 'swapped aircraft' with Stainforth and flew the Bf 109, it seems rather strange that there is no corresponding entry in his flying logbook. Indeed, all that appears is his 50-minute Spitfire flight where he 'fought' Stainforth in the Bf 109E. Nevertheless, Tuck would later state that the Bf 109E was:

> . . . without doubt a most delightful little aeroplane, not as manoeuvrable as the Spitfire, mind you, nor as nice to handle near the ground. It had a tendency to enter a rather vicious stall, but it was slightly faster, and altogether it had a wonderful performance.



Bf 109E 'Red 7' of an unidentified unit has suffered an all-too-common landing accident resulting from its narrow track undercarriage configuration. (1940 History)

Stainforth, who was subsequently killed in a Beaufighter crash in Egypt on 27 September 1942, did not leave us his specific views on the Bf 109E. Tuck, however, was already fully aware of the capabilities of the Bf 109E prior to engaging Stainforth in the skies over Hampshire, for he had clashed with the Messerschmitt fighter over France during the evacuation of Dunkirk.

Oberleutnant Julius Neumann of 6./JG 27 was one of the Bf 109E pilots who was shot down escorting Ju 87s in accord with Göring's diktat to protect the Stukas at all costs. Neumann crash-landed at Shanklin, on the Isle of Wight, on 18 August 1940 after tangling with Hurricanes of No 43 Sqn. In a final act of defiance, he set fire to his aircraft before being captured. (1940 History)

Returning to the point about heaviness of controls, few (if any) Luftwaffe pilots seem to have complained about the Bf 109E's handling characteristics. Experience gave confidence, and high-G pull-outs were feasible with liberal use of the powerful stabiliser trimmer. The 'evidence' of the Bf 109E's poor turning ability to the left when diving at a high IAS was little more than risible nonsense.

When he was captured on the 9 June 1941, 23-victory ace Oberleutnant Werner Machold (a Battle of Britain veteran and *Staffelkapitän* of 7./JG 2) confirmed that, according to his interrogation summary, he was adamant of one thing:

> Contrary to the statements by previous Me 109 pilots, this man maintains that it is not at all difficult to execute a left-hand turn at high speed. On the contrary, he would always try to force his opponent into a left-hand turn.

The report then added a caveat, stating:

> It should be mentioned, however, that this man is very powerfully built.

It is surely the case that the flying (and fighting) qualities of the Bf 109E are best evaluated by those who flew them operationally. One such individual was Oberleutnant Julius Neumann of II./JG 27:

> The first idiosyncrasy encountered when learning to fly the Bf 109E was provided by the fighter's take off. It demanded quite a lot of right rudder to hold it straight, the propeller torque resulting in a predilection for breaking left. Fortunately, one soon became accustomed to this tendency. The landing, too, presented something of a problem for novices. As one reduced speed for the approach, control sloppiness increased. At about 145km/h the leading-edge wing slats opened automatically, and one immediately felt the extra lift that they imparted.

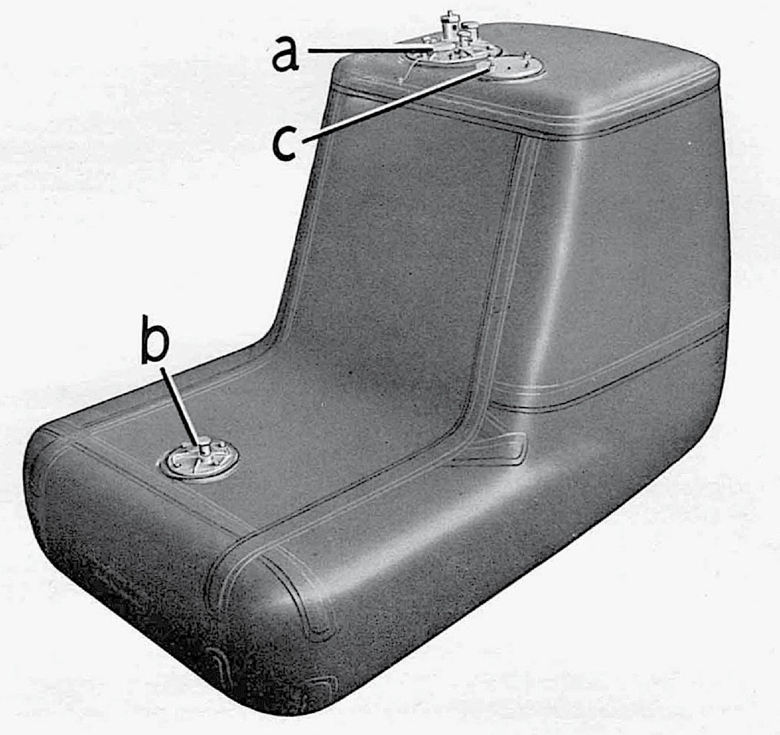


Abb. 24: Kraftſtoffbehälter

a = Hauptbehälterkopf b = Nebenbehälterkopf c = Befeſtigungsflanſch für Vorratsgeber

The Bf 109E fuel tank was shaped so that it accommodated the pilot's seat. This left the pilot literally sitting on the tank. Although seemingly counter-intuitive, this proved a safer configuration than in the Spitfire and Hurricane, which had their fuel tanks situated in front of the pilot. It meant that if the Bf 109E's fuel tank caught fire, then the flames would mostly be swept back and behind the pilot. This illustration is from the Bf 109E handbook. (1940 History)

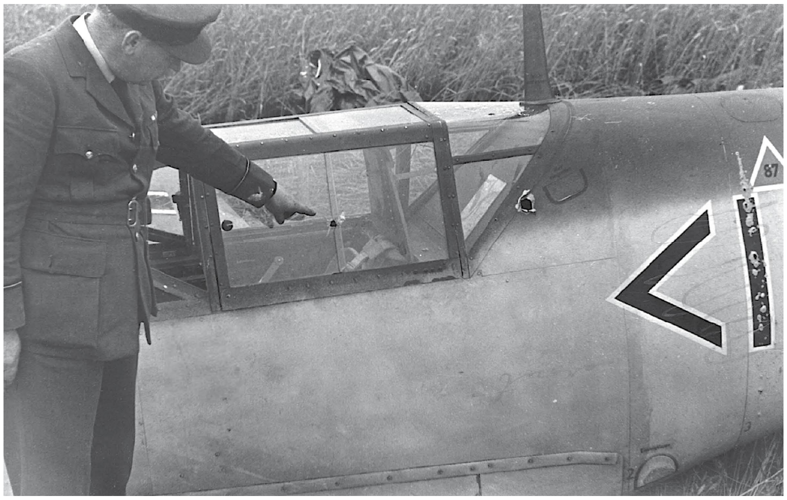
> The stalling speed with undercarriage and flaps down was about 90km/h, and below that speed the '109 would drop a wing violently and without warning. Under such circumstances, the fighter fell like a stone, and unless a reasonable amount of height was available, there was no time to recover. It was also vital to get both main wheels on the ground simultaneously, or else the aircraft

> would swing in the direction of whichever wheel touched first. As often as not, the result was a broken undercarriage leg. Quite a few Bf 109Es were written off during pilot conversion, but once pilots accustomed themselves to these less than endearing characteristics, accidents were relatively few – even at our primitive forward landing grounds such as those utilised in France.
>
> At speed, the Bf 109E had few vices and handled beautifully. For its day, it was very fast and offered an excellent rate of climb. Up to its maximum horizontal speed, it was very light on the controls, and it was easy to handle, although the controls did stiffen up considerably in the dive.

So much, then, for the flying qualities and characteristics of the Bf 109. Opinions varied, but there were other features that also marked out the E-model as an effective weapon of war. Although seemingly counter-intuitive, the Bf 109E's fuel tank was, in effect, a chair-shaped container, and it was so-shaped in order that the pilot's seat literally 'sat' inside its form. While sitting on a large tank of aviation fuel might not seem ideal, it certainly proved to be preferable to the Spitfire and Hurricane configuration, where large fuel tanks were situated in front of the pilot, almost in their laps. It was a recipe for potential disaster if these fuel tanks caught fire, for the slipstream blew furnace-like flames back into the cockpit. This was the primary reason why so many RAF fighter pilots of 1940 suffered such grievous burns when shot down. This did not happen with the Bf 109E.

In such instances where the Messerschmitt's fuel tank caught fire, the slipstream simply blew the flames back along the fuselage, behind and away from the pilot. And whilst this inevitably resulted in the destruction of the aircraft, and would necessitate the pilot bailing out, it would explain why so very few captured Bf 109E pilots during the Battle of Britain suffered serious burns. It was a striking difference to the experience of RAF pilots caught up in similar circumstances.

The tank itself was also protected by two-piece steel armoured plating that entirely filled the fuselage void directly behind the tank. Although heavy, this 8mm-thick steel plating protected not only the tank but also the pilot from a direct astern attack. Evidence of the armour's efficacy can be seen in photographs of Bf 109Es downed over Britain in 1940, where 0.303-in. rounds have entered the fuselage, impacted the armour and then caused spalling and splintering of multiple steel flakes from the plating. The rounds had impacted into the fuselage, creating a neat ring of splinter holes that exactly followed the line of the armour.



RAF investigators noted that Bf 109E-1 Wk-Nr 6296 of *Stab* III./JG 26, which force-landed in Margate on 24 July 1940 after being attacked by a No 65 Sqn Spitfire, was fitted with a new type of head armour. However, this did not save its pilot, Oberleutnant Werner Bartels, from being seriously wounded in action – entry holes for the 0.303-in. rounds that hit him can be seen in the fuselage to the left of the hand hold flap and in the canopy. Noteworthy in this photograph are the vertical splinter marks along one of the fuselage frames immediately to the right of the black chevron marking. It would appear rounds impacted the back of the interior fuselage armour and splinters and spall then splattered outwards along its line. If so, then it is likely that the fuselage armour saved Bartels from yet further injury or death. (1940 History)

While opinions vary as to how good a fighter the Bf 109E was during the Battle of Britain, it certainly had its faults and vices just like any other fighter of the period. Given equal opportunity for engaging in combat with RAF Spitfires and Hurricanes, the quality and experience of the pilot at the controls of the Bf 109E would usually be the over-riding factor in determining whether the Messerschmitt emerged victorious.

CHAPTER 5

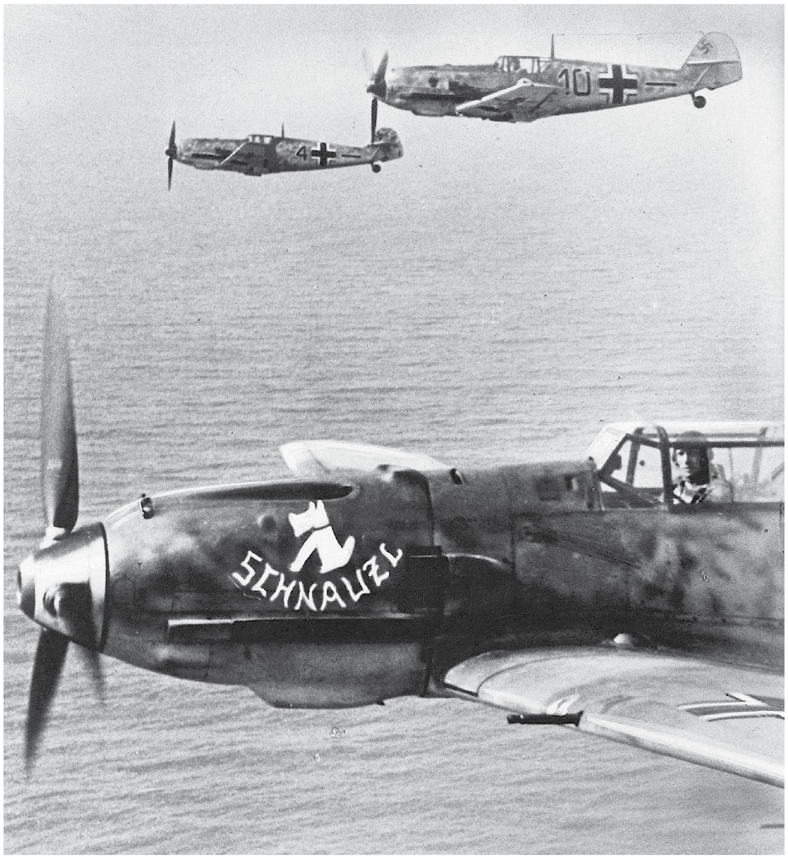
THE ART OF WAR

It was often the case that the Bf 109E formations flown over Britain in 1940 were *freie Jagd* operations (as previously described by Erwin Leykauf in Chapter Three). Essentially, these were fighter sweeps involving large numbers of Bf 109s ahead of following bomber formations. The latter would have been timed to be incoming at a point when it was judged that the defending RAF fighters, exhausted of fuel and ammunition, would be on the ground replenishing. Thus, at the very moment the bomber formations arrived, the RAF would be caught off guard.

However, such an assumption by the Luftwaffe was a somewhat flawed one because not all available RAF fighter squadrons would have been sent off to intercept the *freie Jagd*. Indeed, 'fresh' squadrons would be on the ground waiting to be scrambled into position when the next raid came in. Meanwhile, those RAF fighters that had previously engaged the *freie Jagd* could often have been made ready and sent off again to intercept the now returning bombers or fighters.

The *freie Jagd*, therefore, was not necessarily a hugely beneficial tactic for the Bf 109E fighter force. Often, it simply resulted in merely exhausting the German pilots and perhaps losing aircraft and men for the benefit of claiming a few British fighters. Certainly, depleting the RAF's defensive capability by one or two fighters was always useful, but at what cost? And was it worth the effort? Perhaps the Luftwaffe should have reviewed things through a more searching cost/benefit analysis of these operations? It would not be too long before the whole tactical approach to Bf 109E missions over Britain changed at the instigation of Luftwaffe high command anyway.

In terms of any wider success for *freie Jagd* sweeps, such effort might well have better been saved for dedicated bomber escort operations. However, there *were* yet further significant combat advantages that could be gained by the Bf 109E over RAF fighters on *freie Jagd* operations – higher altitude and longer combat duration. As we have seen, altitude was the key to combat and tactical advantage for the Bf 109E formations operating over Britain in 1940, and it was mostly the case that the Luftwaffe held that advantage for their fighters (at least initially) when escorting bombers. With *freie Jagd* operations, such advantage could be further exploited.



The loose formation of a four-aircraft *Schwarm* was the basis on which the larger *Staffel* and *Gruppe* formations of the Bf 109E were built, allowing the fighter to operate with maximum efficiency in combat. It essentially comprised two pairs of two aircraft, with all pilots positioned to be able to best look out for each other. Looseness and flexibility were key, with the Bf 109E pilots of 1940 better able to keep an eye on the tactical situation and look out for the enemy than was the case with their opponents from RAF Fighter Command. Spitfire and Hurricane squadrons tended to fly rigid and closer formations, meaning pilots were occupied keeping station rather than looking out for the enemy. These aircraft are from 5./JG 3, with the Bf 109E marked *SCHNAUZL* almost certainly being assigned to future ace Unteroffizier Josef Heinzeller, who had a dog named 'Schnauzl' during 1940. (1940 History)

The Bf 109E units assigned to *freie Jagd* sweeps could take off and climb inland of Calais to a greater altitude than might have been the case if they had been operating in the purely bomber escort role. This was because fuel conservation was less critical when the fighters were not escorting bombers. For one thing, they did not have to slow to the speed of the bomber formations, or even fly a weaving pattern across the English Channel to keep at the bombers' pace, and thereby reduce their available range. The Bf 109E pilots could also continue to climb to altitude as they crossed the Channel, which meant that their height advantage when finally over Britain could be significantly greater than it might have been when escorting bombers. And there were other advantages, too.

With increased altitude came marginally increased fuel efficiency, albeit with slightly reduced performance. Nevertheless, it was still a beneficial trade-off or, at least, an acceptable one. Any reduction in performance, though, was at least mitigated by the DB 601's supercharger unit. And for a Bf 109E pilot during the summer of 1940, the most important component was height and a position from which he could command the battle.

To better understand the wider situation as to how the Bf 109E was deployed on its operations over Britain, however, we need to look at things in more detail than just blandly considering sorties that were either *freie Jagd* or bomber escort. To do this, we turn to an essay written by Adolf Galland in the 1950s which set out his understanding of how the Bf 109E forces were deployed over the *Kanalfront* in 1940:

> Luftwaffe fighter sorties over Britain in 1940 could be divided into four categories, and these were:
>
> - (a) Direct Escort
> - (b) Indirect or Deployed Escort
> - (c) Freelance Patrols [*freie Jagd*]
> - (d) Supplementary Escorts to pick up and cover returning formations or for the protection of air-sea rescue operations
>
> In (a), these were patrols of aircraft that gave direct cover to the bomber formation from all sides, weaving among and around it because their speed was greater than that of the bombers. The task of these patrols was to defend the bombers against enemy fighter attacks. This type of mission was purely defensive, and did not correspond to the intended aggressive role of the fighter. Bomber crews, however, attached extraordinary importance to direct escort.
>
> Operations coming under the heading (b) were carried out by units flying at a greater altitude than those engaged on direct escort operations. Indirect formations flew in the general direction from which enemy attacks were expected to come and accompanied the bomber formations at a higher altitude. Their mission was to attack formations of enemy fighters approaching the bombers that were being escorted before the former could take the initiative and attack. They had therefore to keep in visual contact with the bombers they were protecting, and not become separated from them.
>
> Generally speaking, indirect fighter escorts could engage in only one combat and then they had to reform and resume their original position in order to continue the specific task at hand. In the majority of cases, when a unit carrying out an indirect escort mission attacked an enemy formation from above under favourable conditions, the British fighters were beaten off and the bombers effectively protected. Of course, the enemy formation could always take up a new position and

renew their attacks, but the object of the indirect escort mission to neutralise imminent attacks was accomplished in principle.

Adolf Galland, seen here as an oberstleutnant whilst commanding JG 26, wrote extensively post-war about Bf 109E operations over the *Kanalfront* in the summer and autumn of 1940. His knowledge of such events was hard earned, as he claimed 43 victories (all fighters) between 24 July and 5 December 1940. (Tony Holmes Collection)

The third type of mission, (c), consisted of freelance fighter patrols in the area through which the following bomber and escort forces would fly, and over the objective itself. The purpose of these patrols was also to cover the flanks of the bomber formations. They were carried out by fighters in *Gruppe* or *Staffel* strength flying out of visual contact with the bombers. Their task was to penetrate as far as the objective and to establish contact with the enemy before the bombers arrived. Fighter pilots preferred this type of mission, and from their point of view it was the most profitable one. It also afforded the bombers that followed the greatest freedom of action. On their return flights, these freelance patrols usually acted as rear guards.

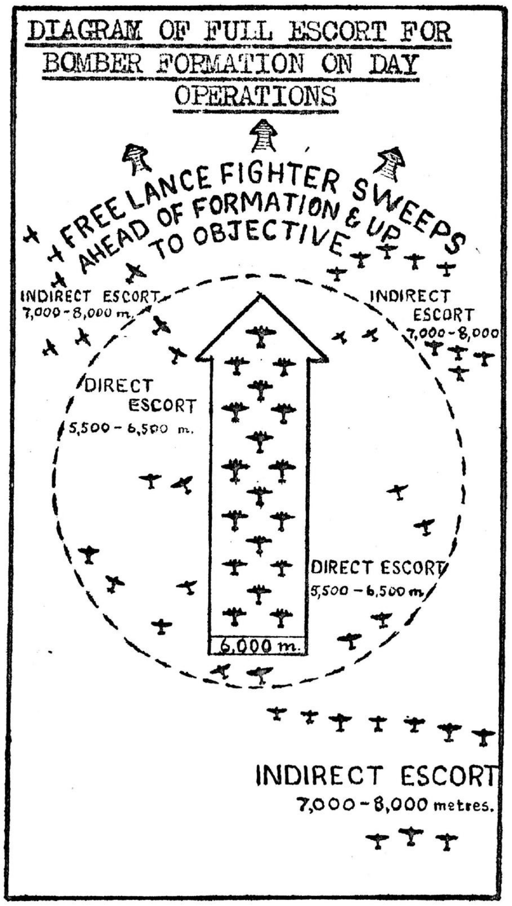


DIAGRAM OF FULL ESCORT FOR BOMBER FORMATION ON DAY OPERATIONS
FREE LANCE FIGHTER SWEEPS AHEAD OF FORMATION & UP TO OBJECTIVE
INDIRECT ESCORT 7,000-8,000 m.
INDIRECT ESCORT 7,000-8,000
DIRECT ESCORT 5,500 - 6,500 m.
DIRECT ESCORT 5,500 - 6,500 m.
6,000 m.
INDIRECT ESCORT 7,000-8,000 metres.

During the late 1950s, Adolf Galland produced this diagram as part of a set of lecture notes on the Battle of Britain. It sets out in schematic form the typical arrangement of Bf 109E fighter units engaged in escorting bomber formations to their targets in England. (1940 History)

The description of mission (d) is self-explanatory. It was carried out in *Staffel* or sometimes *Gruppe* strength from a given point at a predetermined time and altitude. Missions of this type were made necessary because the effectiveness of both direct and indirect escort missions diminished after a certain time, and they then tended to disperse. This was either because of air combat or because fighters broke away and escorted individual bombers that had been damaged and had fallen out of formation; hence, the fighters could no longer cover the remainder of the bomber formation against fresh British attacks. Generally speaking, the supplementary escort missions commenced over the English coast, and thus tended to prevent British fighters pursuing any returning German formations.

Protected by these supplementary escort forces, and by a specially devised form of direct escort at the same time, seaplanes operated with the mission of rescuing the crews of aircraft that had been shot down or had crashed in the Channel. At first, the seaplanes found these operations very tricky, but once the service was working properly it gave excellent results. On several occasions, German and British pilots were picked up even in the Thames Estuary. Thanks to these supplementary fighter escorts, British fighters were unable to operate easily beyond mid-channel.

As far as possible, units were always assigned the same type of mission. The most difficult mission was direct escort. In order to avoid British anti-aircraft fire – which was generally effective – bomber units flew higher than their normal service ceiling and with a speed thus much slower than they should have been. This had a detrimental effect on the escorting fighters, who had to reduce their speed until it corresponded with that of the bombers, and, at the same time, retain their manoeuvrability.

British fighter pilots often pierced the German fighter screens and shot down individual bombers. In order to provide the formations with some measure of protection against such attacks, the direct escort forces had to be split up into patrols of two aircraft each in order to cover the bombers from attacks from all directions. Insofar as it was technically feasible, bomber formations or their leading aircraft maintained uninterrupted contact with the escorting fighters. The direct and indirect fighter escorts were supposed to be in radio contact with one another.

Proficiency in gunnery is an essential ingredient of aerial combat, and here two Bf 109E pilots based in the Pas-de-Calais train in the fine art of deflection shooting with a *Revi* C/12C gunsight (as fitted in the E-model) mounted on a stand while 'firing' at a Spitfire model. The 'fighter band' around the Spitfire's tail would suggest this to be a little later than the Battle of Britain, although the scene would be typical of 1940. (1940 History)

In order to ensure the close cooperation necessary for the accomplishment of direct and indirect escort missions, and as far as possible, they were always assigned to the same fighter squadron. Similarly, and insofar as it was possible, bomber formations always had the same fighter units to

> escort them. Whenever it could be arranged, the chiefs of the bomber formations and of their fighter escorts conferred before and after each attack. However, owing to the large number of sorties to be accomplished, the little time that was available, and the great distances separating the various units involved, these conferences were often held over the telephone.

Galland's summation probably provides us with as good an understanding as we are ever likely to get as to how the Luftwaffe fighter force functioned over Britain in 1940. In respect to how individual fighter units performed, however, Galland was candid in his opinion:

> Insofar as it functioned at all, the system of escorting bombers functioned very poorly. There were neither special tactical rules nor uniformity of conception; each fighter *Staffel* carried out its mission as it thought best. Hence, the quality of performance attained in these fighter sorties was very variable. Some units executed their mission in an extremely satisfactory manner. Others did very badly. It was not until very late in the battle that tactics were standardised.

For the defenders, however, whatever type of enemy formation was headed their way posed problems when it came to second-guessing what they had spotted on RDF, since, as we have seen, the RAF plotters had no way of knowing whether high-altitude echoes on their screens were fighters or bombers. Indeed, they could not tell if bombers were among those formations, or whether they were perhaps 'hidden' or had not been spotted at all beneath the blips on their monitors. The RAF could not, therefore, simply ignore such contacts, dismissing them as only high-flying Bf 109s.

Importantly, the height advantage for *freie Jagd* operations could often be significantly greater than it was for bomber escort sorties. Once battle was joined, the critically important loiter or combat time was just a little longer, too. Here might be a useful point at which to discuss the question of altitude insofar as it impacted the defenders and the Bf 109E formations they engaged.

Some historians and writers have, in the past, stated that Britain's use of RDF during 1940 had meant that defending RAF fighters mostly had the height advantage when it came to intercepting Luftwaffe raids. Nothing could be further from the truth, however, and it is comparatively rare to find RAF combat reports of the period, or entries in the Operations Record Books of RAF Fighter Command squadrons, where intercepting RAF fighters had a height advantage over Bf 109Es. Very often, and especially during the earlier stages of the Battle of Britain, RAF fighters would intercept the bomber formations at, or above, their own altitude, but the Luftwaffe's own fighters would be watching and waiting way above them.

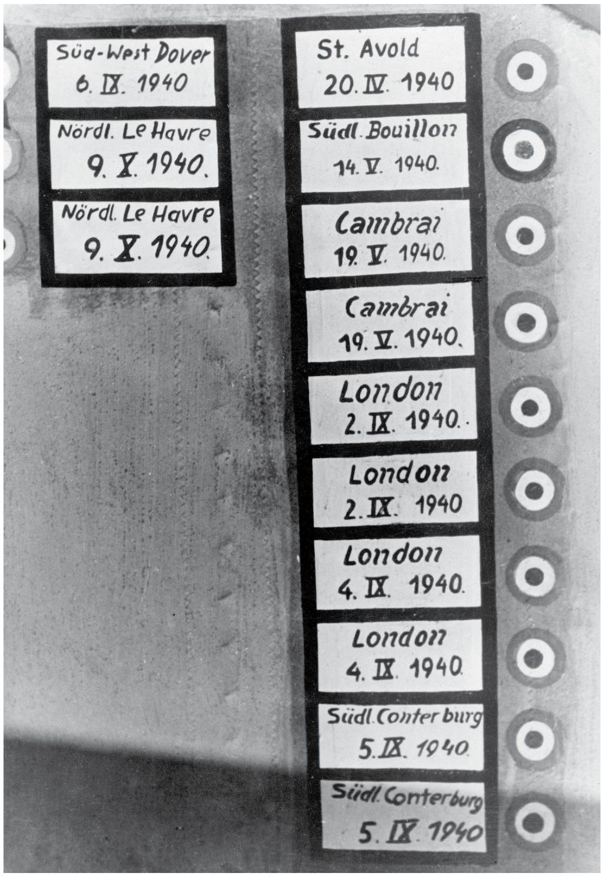
Leutnant Erich Meyer of 2./JG 51 is carried shoulder high by his groundcrew at Pihen, in the Pas-de-Calais after returning from a sortie over England in which he claimed one of his six victories. It is thought that this photograph was taken on 15 September 1940 after his fifth victory, when he reached ace status. Meyer was eventually shot down into the sea on 7 October when flying Bf 109E-4 Wk-Nr 4853 'Black 12', and was rescued from the Channel off Sandgate, on the Kent coast, to be taken prisoner. (1940 History)

Apart from the anecdotal and factual evidence pertaining to some of the Bf 109E interceptions detailed so far in this work, there is archival evidence of the Luftwaffe's enduring height advantage during the Battle of Britain. To take but a few examples, we can look at the days between 8 and 18 August 1940, and to some of the specific recorded instances within that period.

Often, during that time, a height advantage of at least 2,000–3,000ft was typical for Bf 109E formations, and on 8 August it is recorded that No 64 Sqn was attacked by about 20 Bf 109s from '2,000ft above and astern'. Three days later, the same squadron was attacked by Bf 109s that were 5,000ft above it. Both engagements were in the Dover area. Later that same day, and again in the same area, No 64 Sqn had another encounter with Bf 109s, but this time the Luftwaffe fighters had a height advantage of 8,000ft.

On 12 August, over east Kent, No 65 Sqn pilots encountered a German formation that included Bf 109s an astonishing 15,000ft higher than they were. The next day, No 74 Sqn found itself disadvantaged by Bf 109s that were 9,000ft above the unit, and on 15 August, No 1 Sqn had fighters 5,000ft above it over Martlesham, in Suffolk, and No 43 Sqn was disadvantaged to the sum of 2,000ft when its Hurricanes were at 12,000ft over Beachy Head, on the East Sussex coast. The following day, No 56 Sqn pilots had to contend with Luftwaffe fighters being twice as high as they were while patrolling at 10,000 ft.

This was a continuing trend across a very brief snapshot in time during the Battle of Britain. When No 65 Sqn found itself at 4,000ft and climbing over Canterbury on 18 August, so the Bf 109s came down on the unit from 20,000ft. A height disadvantage of 16,000ft was a bad situation for the climbing defenders to find themselves in, with their foes clearly enjoying the upper hand. Nevertheless, Bf 109E units still exercised caution, only sending down penny packets to engage the immediate threat, whilst maintaining a significant force at altitude, watching, and waiting to deal with any emerging threat below.


Süd-West Dover
6. IX. 1940
Nördl. Le Havre
9. X. 1940.
Nördl. Le Havre
9. X. 1940.
St. Avold
20. IV. 1940
Südl. Bouillon
14. V. 1940.
Cambrai
19. V. 1940.
Cambrai
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London
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Südl. Conterburg
5. IX. 1940

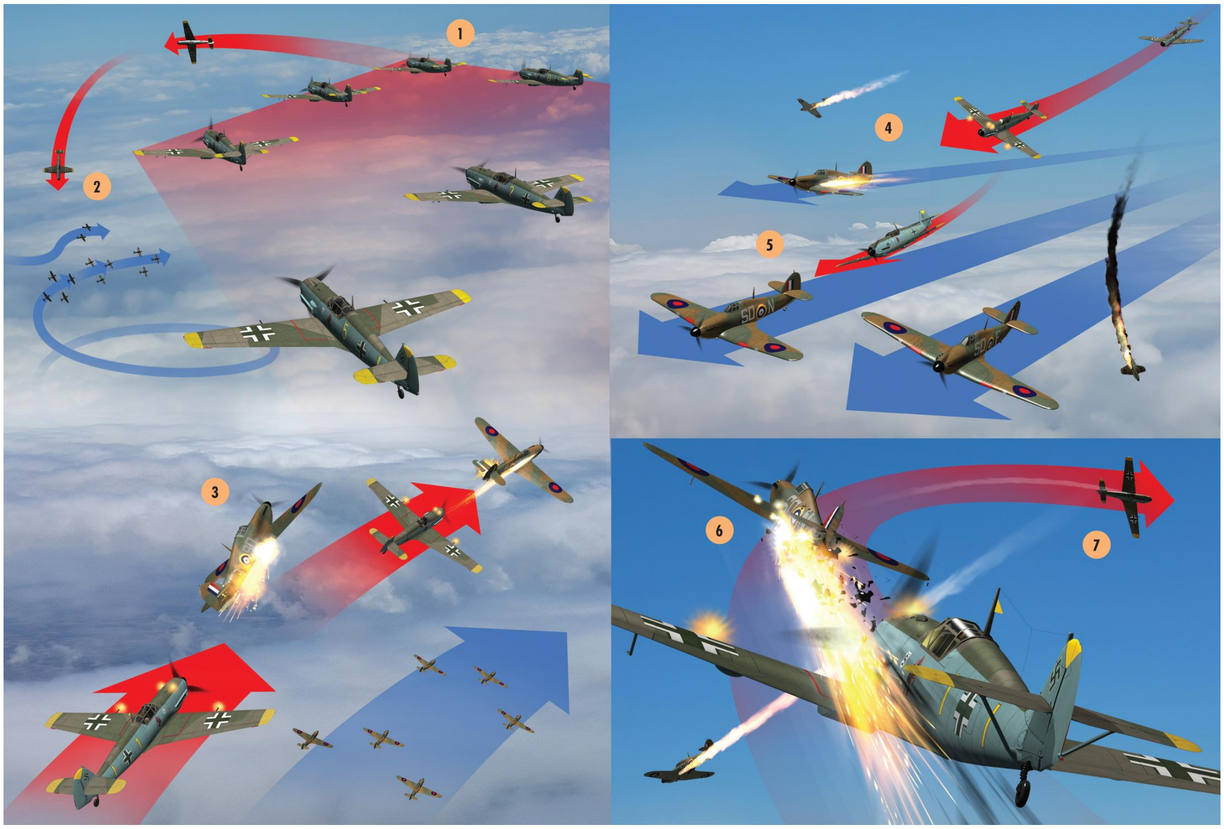
As with other air forces, and in time-honoured fashion, Luftwaffe fighter pilots marked their prowess in aerial combat with victory tallies. In the case of Bf 109E pilots during the Battle of Britain, these were usually painted on the rudder – although sometimes on the fin itself. This was the tally marked on the Bf 109E rudder of Hauptmann Otto Bertram, *Staffelkäpitan* of 1./JG 2, although the last two (on 9 October) were scored after he took command of III./JG 2. The tallies are marked with French or RAF roundels, as appropriate. A nine-victory Condor Legion ace, Bertram's tally in the West stood at 15 victories when he was withdrawn from frontline service on 28 October 1940 after both of his brothers were killed. (1940 History)

Mostly, the RAF defenders knew the Luftwaffe was coming thanks to RDF, but they often did not have time to achieve any height advantage over the fighters. And whilst they may well have often been at a good height to intercept the bombers, they were then in grave danger from the Bf 109s descending rapidly to engage them from above. Whether the German fighters were on a *freie Jagd* or undertaking bomber escort, it was after they had dived through the RAF fighters that they became a little more vulnerable, as previously intimated.

However, things were to change for the Bf 109E pilots operating over England when the *Jagdgeschwadern* escorting bombers were instructed to tie themselves more closely to the formations they were protecting. It was an unpopular directive, for it placed the Bf 109Es more in harm's way from the defending RAF fighters than had previously been the case when they were operating at higher altitudes. The order's unpopularity and the lack of foresight and wisdom shown by the Luftwaffe's high command in making this decision was articulated by Leutnant Max-Helmuth Ostermann of 7./JG 54:

> We clung to the bomber formation in pairs, and it was a damned awkward feeling. From below, we looked up at the bright blue bellies of the Tommy fighters. Mostly, they waited there until our bombers made their turn, then they would swoop down, pull briefly out, fire their guns and at once dive on down again. All we could do in response was to shoot off short nuisance bursts, while at the same time watching out that there was no one nibbling at our tails. Often, we pulled madly on the stick till the ailerons shook, but we were then unable to turn around quickly enough and could only watch as the Tommies knocked hell out of one of the bombers. It was really depressing, and no way to use our fighters.

The Bf 109E fighter pilots over Britain in 1940 were of one mind – operating like this was no way to use the valuable and relatively effectual Luftwaffe fighter force.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1300 hrs, 18 AUGUST 1940

BETWEEN SANDWICH AND WHITSTABLE

1 In command of III./JG 26 in the absence of Major Adolf Galland, Oberleutnant Gerhard Schöpfel leads the Bf 109Es of the *Gruppe* over the east Kent coast on a *freie Jagd*. The unit is accompanied by the Bf 109Es of JG 3, with the entire German formation comprising more than 40 fighters.

2 Over Sandwich, the Bf 109E pilots spot a squadron of Hurricane Is climbing in vics of three, but with the trailing vic having a fourth man in the box, and with two other fighters weaving above and behind to cover the formation. Deciding that a solitary attack would achieve the most surprise, Schöpfel leaves the rest of his *Gruppe* and dives down to attack with the sun behind him.

3 The RAF aircraft are from No 501 Sqn, flying from Gravesend, in Kent. Schöpfel achieves complete surprise, shooting down the two weaving Hurricanes, killing Plt Off John Bland and forcing Plt Off Franciszek Kozlowski to bail out with serious wounds, without the remainder of the formation even noticing. Meanwhile, the other Hurricanes continue their spiral climb.

4 Schöpfel now hits the rearmost Hurricane in the trailing vic and sets the aircraft on fire as its pilot, Sgt Donald McKay bails out with slight burns. Incredibly, the remaining Hurricanes still fail to notice that anything is wrong and continue climbing in formation, with the Bf 109E behind them. Schöpfel then turns his attention to the Hurricane flown by Plt Off Ken 'Hawkeye' Lee.

5 Carried away with his run of success, Schöpfel allows himself to close too much on Lee's fighter before opening fire at point-blank range.

6 Hit by the full force of the Bf 109E's firepower, the Hurricane explodes, sending burning debris back at its attacker and splashing oil over the Messerschmitt's windscreen. Lee bails out with a bullet wound to his leg.

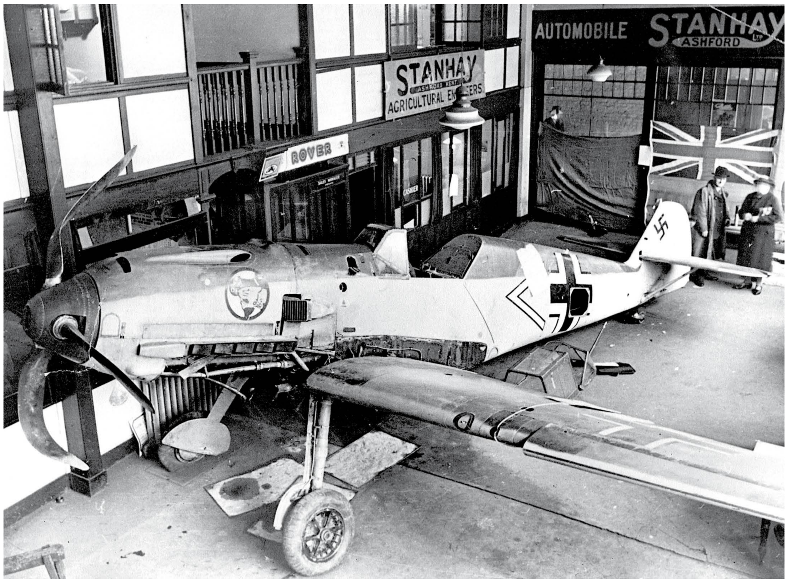
7 Unable to see, Schöpfel is forced to break off his attack and head for home with four more victories added to his tally. Meanwhile, the surviving Hurricane pilots land back at Gravesend, unaware of what has occurred or the fate of their comrades.

CHAPTER 6

COMBAT

A case in point that illustrates the unpopular decision to tie the fighters more closely to the bomber formations, as so eloquently expressed by Leutnant Max-Helmuth Ostermann in the previous chapter, was the fate that befell one Bf 109E pilot over England on 9 September 1940. The background circumstances were similar to those described by Ostermann.

At approximately 1710 hrs, a large enemy formation was plotted by the Pevensey RDF station as it approached Beachy Head. It resulted in the No 11 Group controller scrambling six of his squadrons to counter the threat – Spitfires of Nos 609 and 234 Sqn to cover Brooklands, in Surrey, the Hurricanes of No 229 Sqn to patrol Northolt, in Middlesex, and No 72 Sqn's Spitfires to protect Biggin Hill, in Kent. Meanwhile, the Hurricanes of No 607 Sqn from Tangmere, in West Sussex, and Spitfires of No 602 Sqn from nearby Westhampnett were vectored to intercept the German formation after it had crossed the Sussex coast. Eventually, the fighters met around 40 Do 17s and their large close-escorting force of around 50 Bf 109Es in the Mayfield area of East Sussex.



The Bf 109E-4 of *Stab* I./JG 27 which Oberleutnant Günther Bode landed at Knowle Farm near Mayfield, East Sussex, on 9 September 1940. It is seen here on temporary public display at Stanhay's Motor Garage in Ashford, Kent, during late 1940. (1940 History)

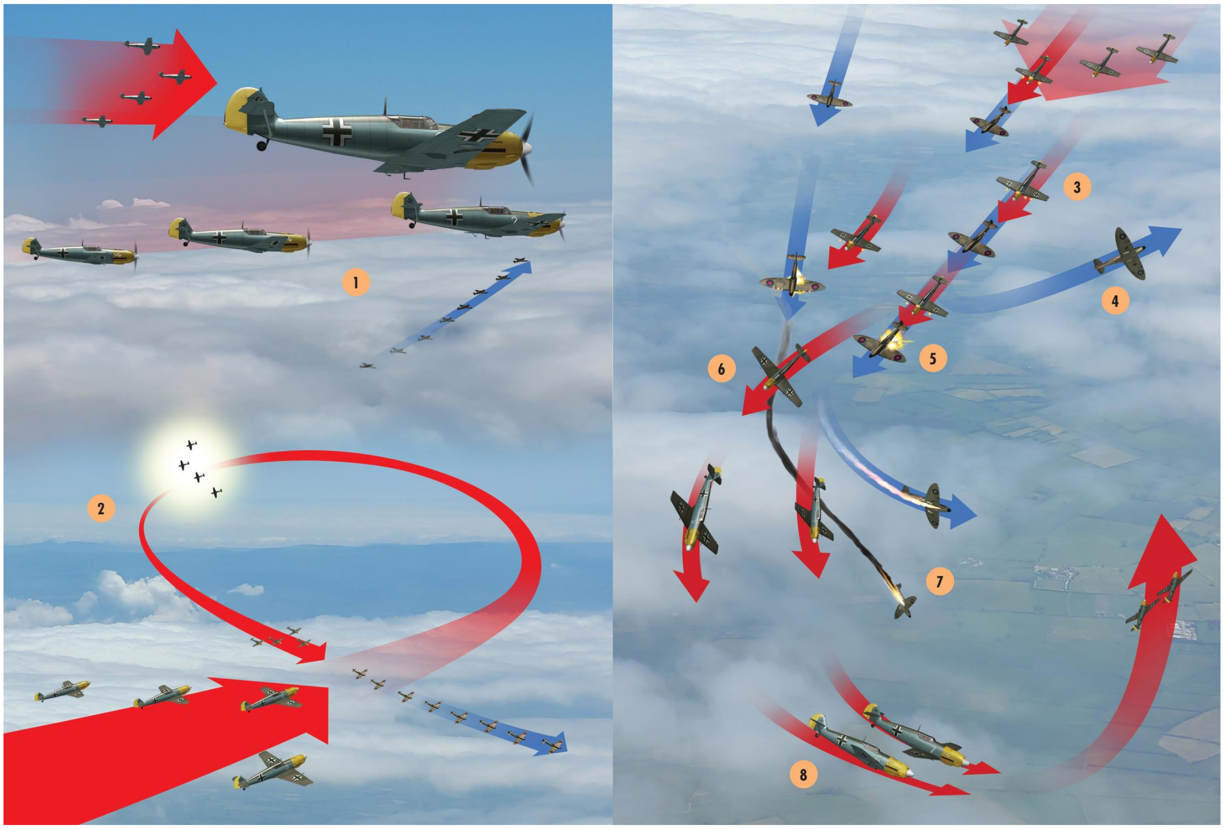
Amongst the escorting Messerschmitts were elements of JG 27, including the *Stab* flight of I. *Gruppe*. The unit's adjutant was Oberleutnant Günther Bode, who was destined to make a one-way trip that day whilst flying from his base at Guines, in the Pas-de-Calais.

For No 607 Sqn, the engagement was truly a baptism of fire during the Battle of Britain. Although the unit had been heavily engaged during the French campaign, this was the squadron's first real taste of action during the battle, having only just been posted south from a long stay with No 13 Group in the north of England. Splitting his fighters, the squadron CO, Sqn Ldr James Vick, sent Blue Section to engage the bombers (at 16,000ft) while Green Section acted as a rearguard and both Red and Yellow Sections were ordered to deal with the fighters flying just above them.

Whilst no conclusive engagements with the fighters were recorded by No 607 Sqn, it did lose three pilots killed and two others shot down but safe. In return, a single claim was made for a Do 17 destroyed. However, it seems highly likely that Oberleutnant Bode fell victim to this brief encounter with No 607 Sqn. He would later describe in his own words what had happened to him on 9 September:

The weather had been bad that day, but by 1630 hrs it had cleared sufficiently to allow us to fly the planned mission and, as *Gruppe* Adjutant, I flew at the side of our *Gruppen* commander at the top centre of the formation. When we reached the area of London, we saw some Hurricanes, and one climbed up and dived down on us from about 3,000ft above.

He was flying quite a way behind us, and further away than what would have been a normal attacking distance. Besides, there were other Bf 109s behind us, and so we paid no real attention to him since he did not seem a direct threat. The pilot, however, must have pressed his gun button and just aimed at our entire formation as he dived towards the ground. Suddenly, I heard a little noise in my Bf 109 like a dried pea falling onto a tin plate. In the first minutes, nothing happened, and I am sure the Hurricane pilot will never have known that he was the reason for my downfall. He could not have seen any success from his action, and we continued on our course without loss or apparent damage.



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1800 hrs, 30 AUGUST 1940

OVER EAST KENT

1 Bf 109Es of 7./JG 54 are flying into southeast Kent on a *freie Jagd* when they spot eight RAF fighters flying in line astern emerging from cloud below them. The aircraft are Spitfire Is of No 222 Sqn, up from Hornchurch, in Essex.

2 7./JG 54's experienced *Staffelkapitän*, Leutnant Max-Helmuth Ostermann, leads the formation around until they are 'up sun' and then orders his *Schwarm* to attack. Invisible to the Spitfires because of the sun, the Bf 109E formation has caught the enemy in a perfect bounce.

3 As Ostermann downs the first Spitfire, Feldwebel Erwin Leykauf positions himself behind the next enemy fighter and prepares to open fire.

4 Spotting the threat behind him, the Spitfire pilot breaks hard to port and away from Leykauf, denying him a chance of a victory.

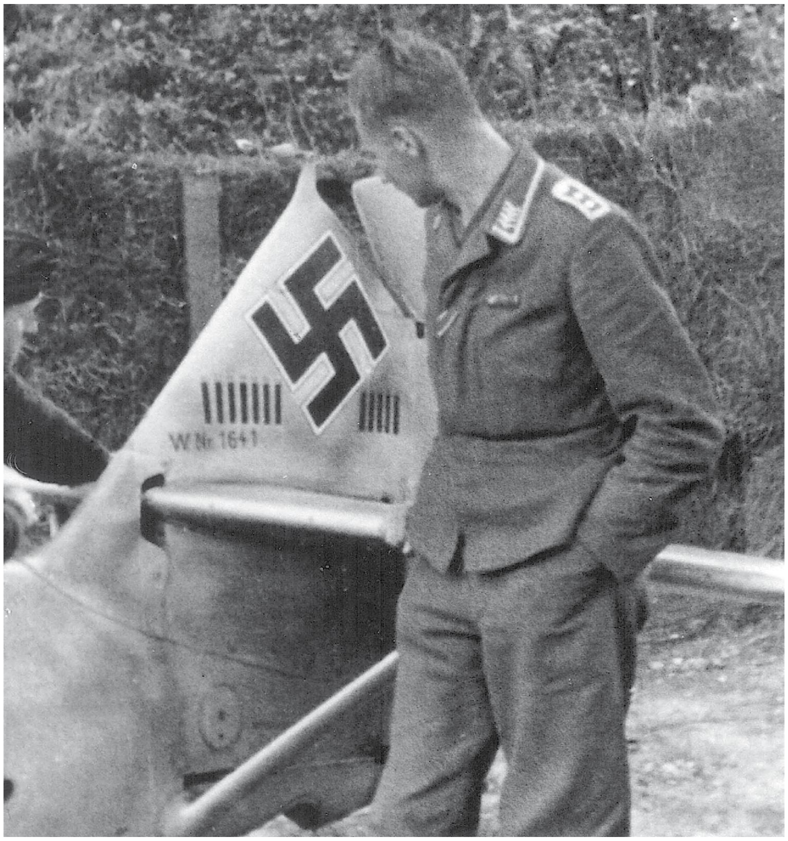
5 Almost immediately, a second Spitfire appears in front of Leykauf and he opens fire, hitting the enemy aircraft. Burning, the Spitfire spirals away into the cloud cover below.

6 Tracer rounds then streaks past Leykauf's cockpit as another Spitfire gets onto his tail.

7 Before it can fire at him again, the Spitfire is hit and shot down by a fellow *Staffel* pilot, Feldwebel Max Clerico. Turning on its back, the Spitfire dives away to crash.

8 Waving to his saviour, Leykauf forms up with Clerico and the pair head home to Guines-South, in the Pas-de-Calais. The combat has lasted mere seconds, but it has left four Spitfires of No 222 Sqn destroyed. Although Flt Lt Geoffrey Matheson, Plt Off Hilary Edridge and Sgt Arthur Spears survive the one-sided clash with wounds, Sgt Joseph Johnson is killed. *Stab* III./JG 54 also claim two Spitfires destroyed in this action.

After a short while, I was alarmed to see my engine temperature rising and a little bit of white steam coming out of my right wing from the radiator, and so I notified my CO by radio. He told me to try to get home, and so I left the formation and flew south towards the Channel. I was very wary, because single aircraft leaving formation were always singled out for attack, but eventually my engine temperature was critical and I could not go on, so I selected a field for a wheels-up landing.



An unidentified oberfeldwebel admires the tail unit of Hauptmann Ernst Wigger's Bf 109E-4 Wk-Nr 1641 'Black 6' displaying ten victories, the last one scored on 31 August 1940. It was in this aircraft that Wiggers, *Staffelkapitän* of 2./JG 51, was shot down and killed on 11 September. (1940 History)

> Getting it down without an engine and into what was a small field was no problem at all, and the automatic leading-edge slats helped me a great deal. It was a bitter end to my war flying – especially as I had often seen Bf 109s getting home to France with 50 or more hits. In my case, just one hit in a vital place had been enough to stop my engine. As I climbed out of my cockpit, I could already hear the drone of my comrades returning home directly overhead.

Oberleutnant Bode had put his Messerschmitt down at Knowle Farm, near Mayfield. Skidding across the sloping field, the Bf 109 had spun sideways and narrowly avoided running into several sturdy oak trees before it came to rest in a cloud of steam and dust. Emerging shaken from his cockpit, Bode was almost immediately apprehended by men of the 264th Field Company of the Royal Engineers, who prevented him from destroying his aircraft.

Bode was one of an increasing number of Bf 109E pilots who would fall foul of being tied more closely and inflexibly to the bomber streams.

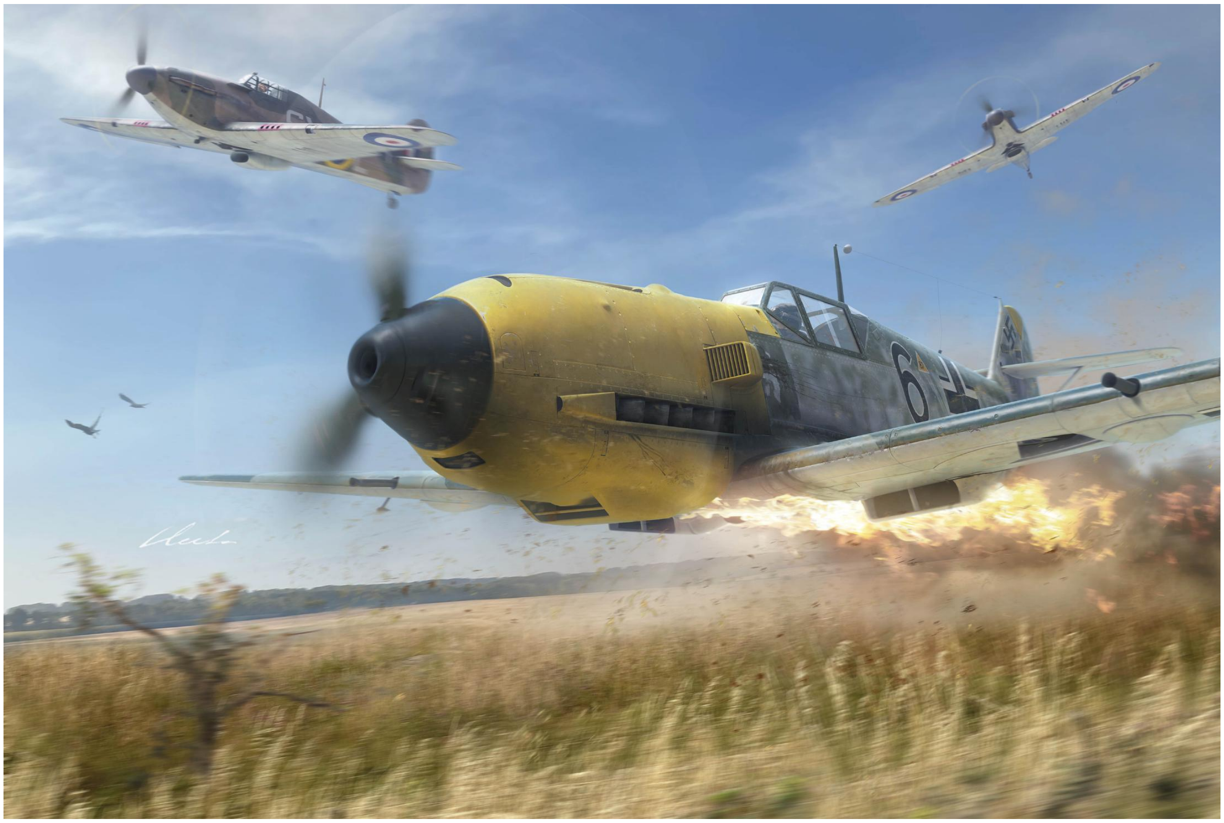
Inevitably, this tactic gave an opportunity for defending RAF fighters to intercept at an altitude greater than the German fighters. Or, as in the case of Bode on 9 September, allowing defenders to climb above the Bf 109s that remained closely tied to their bomber charges. Indeed, he had certainly fallen victim to one of the same diving and scything attacks that had, until so very recently, generally typified the *modus operandi* of the Bf 109E units.

Although the skill and experience of the German fighter pilots were generally the deciding factors in the outcome of aerial combat, it was not always the case. Helmut Bode himself had been unlucky to receive a 'stray' bullet, but there were other occasions where vastly experienced pilots fell victim to relative novices. A case in point was the shooting down of Hauptmann Ernst Wiggers, the *Staffelkapitän* of 2./JG 51, on 11 September 1940.

Engaged on an escort operation, it appears that Wiggers had been closely tied to the bombers when Spitfires and Hurricanes dived down through the formation. Exactly what happened then is unclear, but it is safe to assume that Wiggers either followed one of the attacking RAF fighters down, or, like Bode, his aircraft had been hit and damaged and he was trying to reach home, fast and low, while attempting to avoid other enemy fighters. He may have even been looking for a place to force-land. The final possibility is that the combat he had joined had simply descended to a much lower altitude.

Whatever it was that brought Wiggers down to a terrain-hugging height, he was now being pursued across the South Downs near Lewes, in East Sussex, by three Hurricanes, one of them flown by Sgt 'Bill' Higgins of No 253 Sqn. Higgins, who had first engaged the enemy at 16,000ft, reported:

> I was Yellow 2. The squadron attacked a large formation of enemy bombers in sections echelon. The breakaway from each individual attack (carried out over Maidstone, the enemy proceeding towards London) was so swift that no one was able to ascertain the extent of his own particular burst. However, three or four of the bombers did definitely go up in flames. After this first attack, I was separated from the remainder of the squadron, finding myself very busy in a duel with an ME 109 which I finally set on fire inland near Newhaven, when the aircraft crashed in flames. In my attack, I fired varying lengths of bursts and from numerous ranges varying from 300 yards to point blank.



DEATH OF AN ACE

Hauptmann Ernst Wiggers had served as *Staffelkapitän* of 2./JG 51 under Major Werner Mölders since the latter took command of the *Geschwader* on 27 July 1940. Evidently highly regarded by Mölders, Wiggers is referred to in the wartime book by Fritz von Forrel, *Mölders und seine Männer*, a photograph of Wiggers in conversation with his *Kommandeur* also appearing in the volume. Claiming a total of 13 victories during the Battle of Britain, Wiggers was certainly one of the Luftwaffe's rising stars until his career as an *Experten* was cut short on 11 September 1940 when he was downed over England by a relative novice NCO pilot flying a Hurricane.

Having taken part in a bomber escort mission for He 111s of KG 1 and KG 26 (both units being tasked with attacking the London Docks), the Bf 109Es of 2./JG 51 found themselves hard pressed when engaged by a large number of enemy fighters. In its assessment of German tactics that day, the RAF later noted, 'It can be seen that the whole operation displayed some of the earliest signs of a weakening of the German day offensive.' The same narrative also remarked 'the German fighters showed less than their usual determination to protect the bombers.' Indeed, RAF Fighter Command succeeded in bringing down six He 111s over land, with a further three crashing in the English Channel. Also lost were six Bf 110s and four Bf 109Es. Of the latter, two were from JG 51 – one from 8. *Staffel* and Hauptmann Wiggers of 2./JG 51.

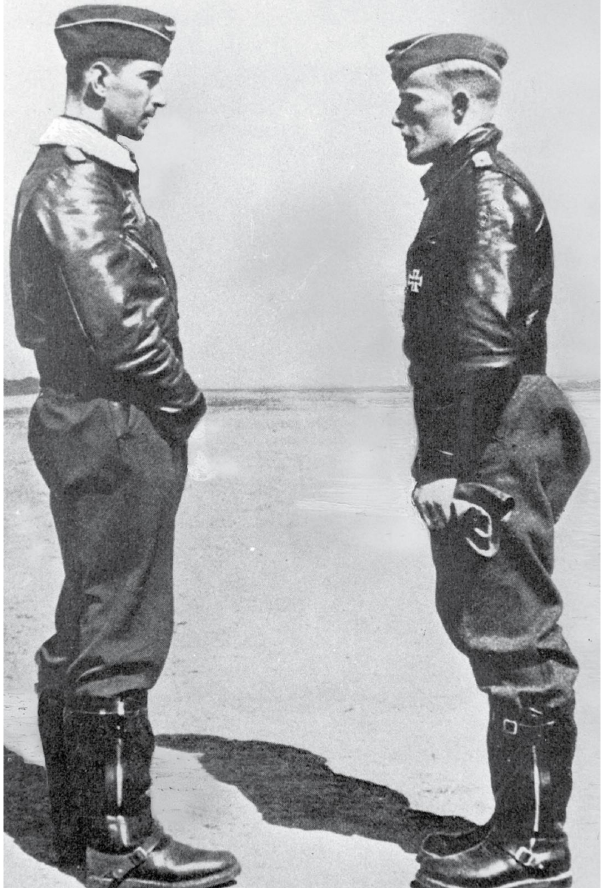
Somehow finding himself at very low-level over the Sussex countryside, Wiggers was pursued by Sgt 'Bill' Higgins of No 253 Sqn, who eventually sent Bf 109E-4 Wk-Nr 1641 'Black 6' crashing in flames on the outskirts of Lewes. The German ace perished when the fighter hit the ground, the Messerschmitt burning so intensely that Wiggers could not be identified and he was buried in Lewes as an unknown German airman. However, RAF intelligence officers had found an identity disc marked 65152/17, which allowed investigators to determine that the pilot was from 2./JG 51. Reburied at Cannock Chase German Military Cemetery in Staffordshire in the 1960s, Wiggers was formally identified at that point.

Three days after downing Wiggers, Sgt Higgins was himself shot down and killed while in combat with Bf 109Es.

On the ground, the spectacle of the low-level chase was witnessed by Police Superintendent Britton, who later reported:

> I was on the hill about a mile from the main road when I heard the sound of aircraft and bursts of gun fire. I then saw the German machine flying across Lewes from east to west, closely followed by three Hurricanes. At Houndean Bottom, it was shot down and burst into flames. The Hurricanes circled round a time or two, dipped in salute, and flew off.

Wiggers, who stood no chance of survival in the blazing wreck, could not be identified by investigators, and was initially buried as an unknown German airman. His victor, 'Bill' Higgins, had only begun his operational career as a fighter pilot on 3 July, and had just two shared, probable and confirmed victories to his name. Wiggers, by contrast, was a pre-war fighter pilot who had claimed 13 victories (nine of which were confirmed) between 19 June and 9 September. Three days after his victory over Wiggers, Higgins himself would fall victim to Bf 109Es when he was shot down and killed over Bredgar, in Kent.



Major Werner Mölders (left), the *Geschwaderkommodore* of JG 51, and one of his *Staffelkapitäne,* Hauptmann Ernst Wiggers, who led 2. *Staffel* before his death in action. (1940 History)

So far, we have looked at the experiences of Bf 109E pilots on *freie Jagd* operations and those who were tied to the bomber formations following the directive that ordered them to do so. Further compounding the difficulties and frustrations for German fighter pilots over Britain later in 1940, however, were the escort missions now being flown for the Bf 109E *Jabo* operations.

As mentioned previously, Hauptmann Hans Asmus was one of those pilots who was downed on such a sortie, and that same day, 25 October, another Bf 109E fighter pilot made a one-way trip to Britain escorting one of the *Jabo* attacks that were by then in full swing. He was Oberleutnant Joachim Schypek, flying with 5./JG 54, and his detailed account is one that is both fascinating and revealing in terms of Bf 109E operations over Britain:

> I think I must have been somewhere above Tunbridge Wells [in Kent] when we were attacked by Spitfires. However, I only know that we had been trying to reach London when we were intercepted, but as to exactly my position that day I am uncertain.
>
> 25 October was a sunny day, but rather chilly as I recall. 6. *Staffel* had orders to carry their bombs to London – to the docks I presume – while 4. and 5. *Staffel* were assigned to escort 6. *Staffel.* My usual position in the formation was in the rear, and to fly as 'cover' for the squadron, as such.
>
> I forget in which direction the Spitfires that engaged us came from, but there they were coming down on us from above. We couldn't always get too high with the *Jabo* aircraft we were accompanying because of their bombed-up weight – it took ages for them to climb. Furthermore, they couldn't be too high if there was to be some accuracy in their bombing.

The burning funeral pyre of Hauptmann Ernst Wiggers' Bf 109E on the outskirts of Lewes, in East Sussex, on 11 September 1940, photographed shortly after the ace had been shot down and killed by relative 'novice' Hurricane pilot Sgt W B Higgins of No 253 Sqn. (1940 History)

When the Spitfires threatened to come too close into our own rear, I called out the agreed codeword, 'Kniebeuge!' It meant bend your knees, or kneel – something like that. Anyway, it was a signal to turn around 180 degrees. I then started what I had practised successfully many times before, and I pushed my stick forward violently and went into a steep nosedive. The Bf 109E had a fuel-injected engine which ran smoothly irrespective of the flying position of the aircraft, while the Spitfires we met still had carburettor-fed engines with floats, and these got stuck when the aircraft position was changed too violently. At least that was the explanation we were given for the fact that our steep nosedives usually gained us about a 300–400m advantage over pursuing Spitfires. I had been so successful with this manoeuvre so often that it was now a very unpleasant surprise for me to note that a Spitfire was growing ever larger in my rearview mirror.

My thoughts at the time were 'Thank God for the armour plate behind the tank and me!' and 'I hope you won't hit my cooling system!' However, that hope was in vain. Suddenly, I thought to myself, 'Oh, look at those holes in my wings!' Only then did I realise I had been hit, and that my aircraft was drawing big white vapour trails behind me, indicating I was losing coolant fast. I would have to try to gain a safe distance from the English coast and hope that an air-sea rescue aircraft would pluck me out of the Channel waters.

Suddenly, a Spitfire flew alongside me, and the pilot – perhaps the one who had shot me up, but I don't know for sure – waved his hand at me and then banked away. 'What a nice gesture' I thought. But I now had more pressing problems to consider than bothering myself with such chivalrous niceties.

In order to glide as far as possible, I had taken my 'Black 7' out of its dive, moved the flaps out to 20 degrees and throttled back the engine, which then started coughing. I adjusted the propeller pitch to minimum to reduce the wind resistance, and then it stopped shortly afterwards. I just prayed that I would be able to glide and gain the freedom of the Channel waters.

I do not clearly remember the altitude at which I started my dive, but I guess it must have been about 9,000m. When I realised that I had to glide I was probably at about 5,500m, and was losing probably about five metres per second. My confidence that I might reach the water diminished rapidly, and I remember that I thought suddenly that I would not now be able to pick up the engagement ring which I had ordered at a jeweller's shop in Lille. Provided we were given leave, I had planned to announce my engagement at Christmas. I still hoped against hope and firmly decided not to give up. And this meant not parachuting!

Leutnant Joachim Schypek (right) and a member of his groundcrew pose in front of 3./JG 76's 'Yellow 13' at Wien-Aspern, in Austria, just prior to the outbreak of war. A little over a year after this photograph was taken, Schypek, now flying with 5./JG 54, was forced to belly land his Bf 109E near Broomhill, in Kent, after being attacked by Spitfires. (Tony Holmes Collection)

When I eventually crossed the coastline near Lydd [in Kent], I was down to about 100m, and I was far too low to get beyond the three-mile zone of the English coast – our air-sea rescue aircraft would come in that close to the coast, but no closer. I forget what I thought, but it must have been something along the lines of 'Now I must at least just stay alive!' Below me, British Army soldiers were working in the green fields. I think they were mining them against a German invasion.

I headed for a free strip of land, jettisoned my cockpit canopy, put down the landing flaps and fully braced myself for impact. However, it was much softer than I had anticipated. Of course, I then did all the routine things that we had been taught – to cut electrical power, shut the fuel valve

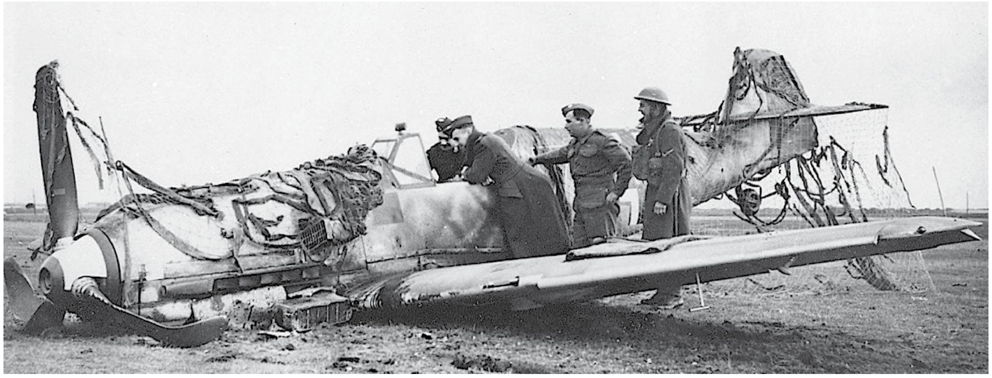
> and disconnect the headphone leads to my flying helmet. Then, I released my shoulder straps, pushed the release button of the parachute harness and jumped clear of my 'Black 7'. There was always a chance that she might catch fire or explode, but she didn't.
>
> An Army captain [sic] then ran up, followed by several soldiers with guns. They all cried out 'Hands up!' and I put them up, but felt rather silly, although a little relieved because at least I knew some English. The officer pulled out a checklist and read out questions. I don't remember the exact words, but he wanted to know whether my aircraft had a self-destruct gadget. It had none. Then he ordered me to surrender my revolver or pistol. I only had a flare pistol, which he wouldn't believe. It was then against our orders to carry pistols in case we shot ourselves if we came down in the English Channel. I never carried one, and they were too bulky for our small cockpits in any case.
>
> I couldn't surrender my radio equipment as he rather stupidly suggested because it had been located behind the armour plate in the fuselage. It had been completely destroyed by the Spitfire's bullets anyway. Then he wanted my maps – to make my escape more difficult I assume. I did not have any maps either. I told the captain that from the altitude at which we used to fly the geography of southern England did not require maps. You found London without one, and you found your way home too.
>
> Thus, besides my flare pistol and my flying overalls, I had nothing to surrender but myself. My war was over. And, on that last sortie, I hadn't even fired my guns!

Captured by Lt O'Malley, 'D' Company, Royal Irish Fusiliers, Oberleutnant Joachim Schypek (with four victories to his credit) had landed at Wall House Farm near Broomhill, in Kent, and was taken by O'Malley to the 135th Infantry Brigade HQ, where he was initially locked up in an anteroom. Exhausted, Schypek fell fast asleep on a sofa, only to be woken as the door crashed open and a fellow pilot, Leutnant Ernst Wagner, stomped in. Startled and confused as to where he was or what was happening, Schypek jumped up and stuttered, 'Oh! Thank heavens it's you. I just had a terrible dream that I'd been shot down and taken prisoner.' For a moment, Wagner looked at him pityingly, before offering, 'Herr Oberleutnant, it's no dream!' Like Schypek, Wagner had been another victim of the same *Jabo* escort sortie.

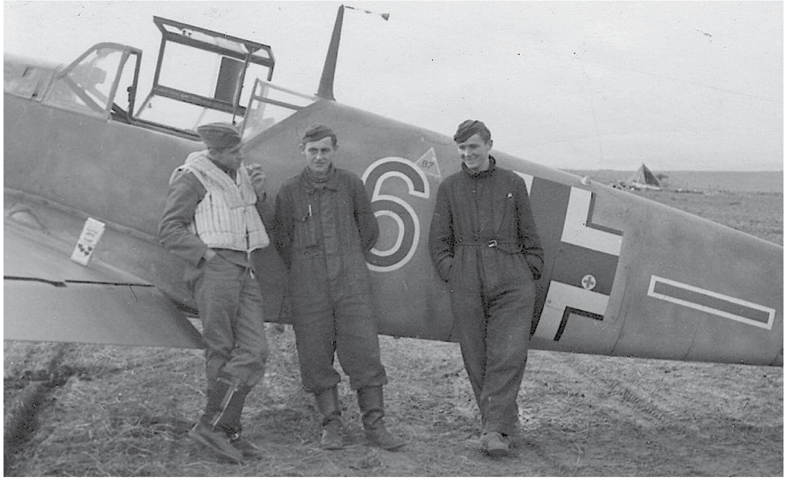
Although the days of the Battle of Britain were now drawing to a close, the strength of the Luftwaffe fighter arm was still continuing to be steadily eroded. Exhaustion, too, was setting in, and that alone was impacting the performance and sharpness of many of the Bf 109E pilots. Writing to his sister on 30 September 1940, Unteroffizier Paul Lege of 5./JG 27 had said:

> I'm so very tired. We fly so many missions. All the time. And sometimes it is two or three a day. It is mentally and physically exhausting. I don't know how much longer I can keep all of this up, although I'm afraid that I do have to!

On the day he wrote his letter, Lege flew three sorties (his 74th, 75th and 76th), and just one week later, on 7 October, he was shot down and killed near Heathfield, in East Sussex. His *Flugbuch* (logbook) tells its own story, detailing 81 war flights (Lege was killed on his 82nd). It shows multiple occasions when he was flying two or three sorties over England per day. This included 7 October, when he failed to return from the third. Lege had claimed a Hurricane destroyed (his third victory) during his second sortie of that day.



Oberleutnant Joachim Schypek was forced to make a belly landing on Britain's south coast near Lydd, in Kent, in Bf 109E-4 Wk-Nr 1988 on 25 October 1940 after sustaining combat damage. When the fighter was examined by British soldiers, it was found that the muzzles of the wing-mounted 20mm MG FF cannon still had their protective covers in place, indicating that Schypek had not had a chance to engage the enemy before his aircraft was fatally damaged by a Spitfire. (Tony Holmes Collection)



Unteroffizier Paul Lege of 5./JG 27 enjoys a snack whilst leaning against his Bf 109E-1 'Black 6' along with his groundcrew at Fiennes during a break between relentless sorties in the early autumn of 1940. They were operations which drained Lege, both mentally and physically, and he was eventually shot down and killed over East Sussex on 7 October 1940. (1940 History)

Of these multiple sorties, Adolf Galland later recorded:

> I was in command of an entire fighter *Geschwader*, and I sometimes received orders to carry out four consecutive sorties in one day as *freie Jagd* operations over England. The physical strain on pilots was enormous, and airframes and engines also suffered from these efforts.

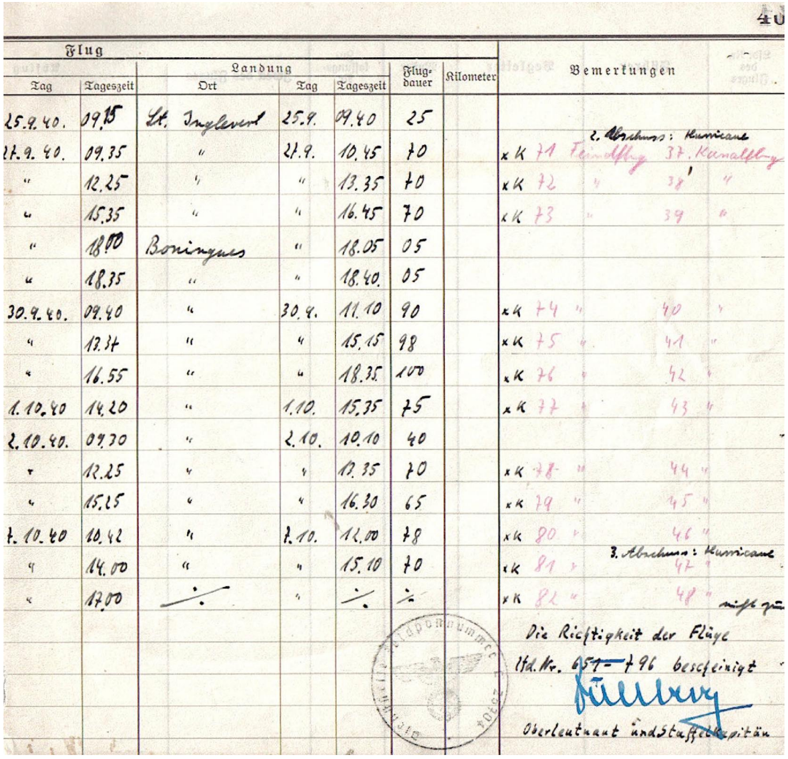
For the Bf 109E pilots on the Channel coast in 1940, nerves were becoming more and more wracked as the days and weeks wore on and fighter losses mounted. As one anonymous fighter pilot who flew during the Battle of Britain commented, 'We had two enemies in 1940 – the RAF, and the English Channel.' For Leutnant Ulrich Steinhilper of 3./JG 52, he saw at first-hand a number of his comrades struck down by so-called *Kanalkrankheit* (Channel Sickness):

> Many of our pilots were nervous wrecks, or fast becoming so. In the end, to get the affected men off operational flying, the medical officer was diagnosing 'appendicitis'. Goodness knows how many of our pilots went in for appendectomies when they didn't need it. It got them off flying, though.

Steinhilper, an ace with five victories, could sympathise. When he was shot down over Canterbury and captured on 27 October 1940, he later confessed to an odd degree of relief that it was all over despite the fact he was now in captivity.

So far, we have looked at combat in the Bf 109E during the Battle of Britain from the point of view of just a few of those who flew and fought in the aircraft. What was it like to be up against an experienced Bf 109E ace, however? Canadian Gp Capt (then Sqn Ldr) J A 'Johnny' Kent, himself a veteran pre-war pilot and an ace, provided the answer in his autobiography, *One of The Few*. Notwithstanding the fact that the action in question took place on 2 November 1940 (two days after the official end of the Battle of Britain), Kent's description is a fascinating insight into dogfighting with a Bf 109E pilot. And in this case, a supremely experienced one.

Hauptmann Wilhelm Ensseln had enjoyed notable success in the Spanish Civil War as a fighter pilot with the *Legion Condor*, and he was one of only 28 men awarded the prestigious Spanish Cross in Gold with Swords and Diamonds. An experienced fighter leader, the 29-year-old flier had subsequently taken part in the campaigns in Poland and France, and had been the *Gruppenkommandeur* of II./JG 52 in the Pas-de-Calais from 1 August 1940, steadily adding to his score of claims. On 2 November, however, he tangled in combat with a Spitfire flown by Sqn Ldr Kent, the CO of No 92 Sqn, who described the combat in graphic detail as follows:



Flug							
		Landung			Flugdauer	Kilometer	Bemerkungen
Tag	Tageszeit	Ort	Tag	Tageszeit			
25.9.40.	09.15	Lt. Inglevert	25.9.	09.40	25		
27.9.40.	09.35	"	27.9.	10.45	70		2. Abschuss: Hurricane xK 71 Feindflug 37. Kanalflug
"	12.25	"	"	13.35	70		xK 72 " 38 "
"	15.35	"	"	16.45	70		xK 73 " 39 "
"	18.00	Boningues	"	18.05	05		
"	18.35	"	"	18.40.	05		
30.9.40.	09.40	"	30.9.	11.10	90		xK 74 " 40 "
"	13.37	"	"	15.15	98		xK 75 " 41 "
"	16.55	"	"	18.35	100		xK 76 " 42 "
1.10.40	14.20	"	1.10.	15.35	75		xK 77 " 43 "
2.10.40.	09.30	"	2.10.	10.10	40		
"	12.25	"	"	13.35	70		xK 78 " 44 "
"	15.25	"	"	16.30	65		xK 79 " 45 "
7.10.40	10.42	"	7.10.	12.00	78		xK 80 " 46 "
"	14.00	"	"	15.10	70		3. Abschuss: Hurricane xK 81 " 47 "
"	17.00	./.	"	./.	./.		xK 82 " 48 " nicht zu

Die Richtigkeit der Flüge
lfd. Nr. ~~651–~~ 796 bescheinigt
Oberleutnant und Staffelkapitän

Unteroffizier Paul Lege's *Flugbuch* included entries for a total of 82 war flights (48 of them over the Channel) and three confirmed victories. This page from the *Flugbuch* shows Lege made multiple flights on most days at the end of September and into early October. Such a high mission tempo wore the resolve of the Bf 109E pilots down, leaving many of them exhausted – and thus vulnerable to being shot down by RAF fighters. (1940 History)

. . . the rest of the formation dived for the coast and did not attempt to turn and fight, at least all but one. We chased after the fleeing Germans, and I caught up with this one and attacked. I found that I had picked an old hand; instead of just running away he waited until I was very close and then suddenly broke to the right and into the sun. I momentarily lost sight of him, but as he continued to turn, he moved out of the glare of the sun and a tail chase developed.

As we came round full circle, he repeated his manoeuvre, but this time I pulled my sights through him and, although losing him under the nose of my aircraft, gave a short burst in the hope that I might get some tracer near enough to him to frighten him into running for home. I misjudged my man, however, and he continued his tactics and apparently had no intention of running at all. Finally, after the fourth or fifth circle, I drew my sights through him again, gave a longish burst and was startled when he suddenly appeared from under my nose and we very nearly collided. I still have a very vivid mental picture of him looking up at me as we flashed past not 20ft apart. I distinctly remember that he had his goggles up on his helmet and his oxygen mask in place.

I also recall the gashes along the side of the Messerschmitt where my bullets had struck and the tail of the aircraft with practically no fabric left on it and a control cable streaming back with a small piece of metal whirling around on the end of it. It is one of those pictures of a split-second's action that remains indelibly imprinted on one's mind. I did not, in the heat of the moment, fully

> appreciate the significance of all this and was jubilant when I saw that my opponent was reversing his turn – a fatal move in a fight – and gave him one last burst from 'fine quarter' into his left side. A thin trail of grey smoke appeared, and the aircraft rolled quite slowly onto its back and started down. I immediately thought that he was getting away, and followed him with throttle wide open, hoping to catch him as he levelled out.
>
> The last time I glanced at the airspeed indicator it was registering something like 450mph, but still the Me 109 outdistanced me and I finally lost it against the ground. While continuing my dive and waiting to see the grey planform of it as it pulled out, I was startled to see a vivid red flash and a great cloud of jet-black smoke appear as the machine hit the ground and exploded.
>
> I came down low to see where the aircraft had struck, but could see no sign of it until I noticed some soldiers running across the fields waving to me. Then I saw it. A gaping hole that looked just like a bomb crater and hundreds of little bits scattered around.
>
> A few days later, the Intelligence Officer told me that the pilot had been quite a highly decorated major [sic], but it had not been possible to establish his identity. Apparently, I had shot away his controls and he was on the point of bailing out when my last burst killed him. This was deduced from the fact that his flying harness was picked up undone and undamaged, and the left half of his tunic was found with six bullet holes in it.

In his extraordinarily detailed account of this aerial duel, Kent is correct when he says that he must have picked on 'an old hand' – in this instance, an 11-victory ace, with nine of those kills claimed in Spain. Kent was also correct when he explained that the pilot was highly decorated, although it had not been possible to establish his identity.

Canadian pilot Sqn Ldr J A 'Johnny' Kent was already an ace when he shot down Hauptmann Wilhelm Ensseln, *Gruppenkommandeur* of II./JG 52, on 2 November 1940. CO on No 92 Sqn, Kent had claimed three Bf 109s destroyed and one probable during the first two days of November. (Tony Holmes Collection)

In fact, and although Kent had not witnessed what had happened when the aircraft disappeared against the countryside below, Wilhelm Ensseln had apparently abandoned his Bf 109E and had seemingly fallen with an unopened parachute, or had somehow dropped out of his harness. Quite what happened is unclear, although it is known that he fell into the sea just beyond the low water mark at Dymchurch, in Kent. According to mortuary records, he was 'rescued' from the sea, which rather implies that he was pulled out alive and died later. However, it seems more likely that he fell dead without an open parachute.

What is not debatable is that for some unknown reason his body defied identification, and he was originally buried at Folkestone (New) Cemetery in Hawkinge, Kent, but rather mysteriously under the name of 'A Schenck'. Subsequent research has identified the grave as that of Wilhelm Ensseln, thus allowing it to be appropriately marked with his name.

Combat with and against the Bf 109E had been multi-faceted throughout the months of the Battle of Britain. The fighter had more than held its own, and for the most part it had often had the upper hand. Until constrained by the 'bomber order', and then assigned the *Jabo* mission, the Messerschmitt had mostly been used, tactically, to far better advantage than had its opponents.

Despite some shortcomings, the Bf 109E itself had also been used by a skilful cadre of pilots to maximise the advantage of its technical superiority in a number of areas.

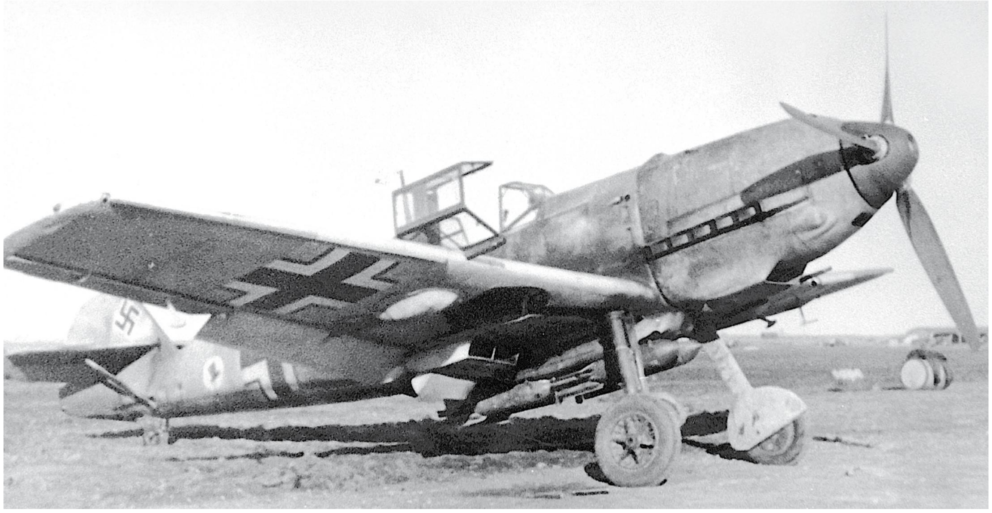
AFTERMATH

For the purposes of this study, the official period of the Battle of Britain is 10 July to 31 October 1940, with the campaign covered in the context of Bf 109E operations over England. But, as with all other Luftwaffe air operations over the British Isles during 1940, the cut-off date of 31 October did not entirely see a cessation of Bf 109E activity over England. On the contrary. However, there was a notable reduction in the number of German fighters crossing the Channel which was entirely in line with the scaling back, generally, of Luftwaffe daylight air activity.

Long before 31 October, German daylight bombing operations had all but ceased, with such sorties now being almost entirely nocturnal. As such, there was no requirement for fighter escorts. Instead, *freie Jagd* sorties were flown by the Bf 109 units when weather conditions allowed. Additionally, and since at least mid-September, one *Staffel* from each *Gruppe* of Bf 109E *Geschwadern* had been designated a *Jabo* unit and tasked with undertaking fighter-bomber sorties against targets in southeast England – primarily London and the surrounding area. These sorties would usually be escorted by the dedicated fighter *Staffeln* from that same *Gruppe*.

However, one particular Bf 109E *Gruppe*, II.(*Schlacht*)/LG 2 (commanded by Major Otto Weiss), was an entirely dedicated ground-attack unit that began operations over Britain in September 1940, usually flying with fighter cover provided by I.(*Jagd*)/LG 2 (commanded by Oberleutnant Herbert Ihlefeld).

These fighter-bomber operations were generally unpopular – leastways, they were certainly unpopular with the dedicated bomber *Staffeln* within fighter *Gruppen*. Not only that, but they were of negligible military and strategic value. The 'aiming' of bombs against targets was at best rudimentary on the majority of *Jabo* operations. The only real 'value' of these attacks was that it often kept London under a state of air raid alert, day and night, in cases where daylight *Jabo* attacks were taking place and nocturnal raids were simultaneously occurring the following night. But daylight fighter operations over Britain were still being performed, and this remained the case right through until the end of 1940.



Bf 109E *Jabo* fighter-bombers became an increasingly common sight over southern England from mid-September 1940, usually carrying a single 250kg SC 250 or 500kg SD 500 bomb attached to an underfuselage ETC stores rack. However, a number of Messerschmitts, including this aircraft, were fitted with the comparatively rare ETC 50 bomb rack for four 50kg bombs beneath the fuselage. Unusually, this particular Bf 109E-4B is from I.(*Jagd*)/LG 2, proving that the *Geschwader*'s fighter *Gruppe* also performed *Jabo* sorties in addition to its normal fighter role. The four SC 50 bombs featured whistles on their fins to enhance their noise while falling. The aircraft was almost certainly photographed at Marquise in October 1940. (*Tony Holmes Collection*)

On 6 November, for instance, Major Helmut Wick's JG 2 engaged Hurricanes and Spitfires over its regular hunting ground – the Isle of Wight and Solent areas. His combat that day was detailed in a book called *Helmut Wick – Das Leben Eines Fliegerhelden* (*Helmut Wick – The Life of a Flying Hero*) by Josef Grabler and published in Germany during 1941. Heavily laden with more than just slight overtones of wartime propaganda, the book must be viewed in that context, although specific episodes are carefully recorded in some considerable detail:

> Today we had a terrific time again. We meet a heap of Hurricanes which fly lower than we do. I am just getting ready to attack when I notice something above me, and I immediately shout over the intercom 'Attention! Spitfires above us!' But they were so far away that I could begin with the attack on the Hurricanes. They were just turning away from their original course, and that sealed their

> fate. Almost simultaneously, the four of us fired at their formation. One went on my account. The rest of the Hurricanes moved away, but then pulled up to a higher altitude.
>
> During this manoeuvre I once again caught the one on the right-hand side, outside. He was done for immediately and went straight down! Now I can't say what it was that was the matter with me on this day, November 6. I wasn't sure if I wasn't well or if it was my nerves which were about to break. When my second Englishman was lying down below, I just wanted to go home.
>
> I would have had enough fuel for a few more minutes, but the urge to go home completely overwhelmed me. Also, to justify myself – if that is at all necessary – there wasn't much I could do with the few minutes I had left in reserve. As we began to turn away and were holding the course for home I saw below me three Spitfires. I was the first to see them, and I attacked immediately. Already the first one fell! But now I was saying to myself 'Go for the others – if I let the other two get away, they will probably shoot down my comrades tomorrow!'

Wick then goes on to describe his return flight across the Channel, and a triumphal arrival back home when he noted to himself that the day's 'bag' had taken him to 53 victories, and that he had only one more claim to make before catching up with his old fighter instructor, Werner Mölders. In fact, post-war research indicates that Wick's tally at the end of that day was probably 52, rather than 53.

Clearly, and once again with the Bf 109E's tactical advantage of height, Wick's Messerschmitts had first fallen on the Hurricanes of Nos 145 and 213 Sqns, and in a sharp and bloody encounter they had bludgeoned two Hurricanes from the sky. Up from Chilbolton, in Hampshire, No 238 Sqn had also joined the fray, and one of its Hurricanes, too, was sent crashing to earth under the collective cannonade of JG 2.

However, the Spitfires of No 602 Sqn had fared rather better, coming through the action unscathed. Indeed, and to partly redress the balance, Sgt Andrew McDowall had sent Bf 109E-4 Wk-Nr 2751 flown by Oberfeldwebel Heinrich Klopp of 5./JG 2 crashing into the sea off Bonchurch, on the Isle of Wight.

As a counterpoint to Wick's contemporary narrative, we also have the first-hand diary account of No 602 Sqn's CO, Sqn Ldr 'Sandy' Johnstone, from that day:

> Was busy dealing with a mountain of bumph in the office when a call came for the whole squadron to scramble, so I dropped everything and dashed off to lead it, as it was ages since we had had one of these! In the event, we intercepted about 30 '109s approaching the Isle of Wight, but when they saw us approaching, they scarpered, making no attempt to stay and fight it out.

> However, I am pleased to say that McDowall got one as it scooted rapidly uphill. I saw it go down in flames. Some Hurricanes from Tangmere also arrived on the scene, when Mac and one of the 213 boys were able to claim a second victory between them, but I did not witness that one as I was too busy trying to catch up with another 109 which was outpacing me in the climb. Lord Trenchard had been right. The Germans are behaving like a bunch of cissies!

Although a fascinating account of the action over the Solent area that day, but from another perspective, Johnstone's remark about the Germans turning and running for home and behaving like 'cissies' is rather wide of the mark. And it is more than a little unfair on the Luftwaffe fighter pilots involved in that particular engagement. We know that the Germans fought hard and well in that action, and had achieved a creditable score of victories to prove so – and that is notwithstanding Wick's surprisingly candid openness about his attack of nerves.

Although the Battle of Britain is officially recognised as ending on 31 October 1940, air fighting over the *Kanalfront* involving Bf 109Es continued for several months beyond that, and Major Helmut Wick, *Geschwaderkommodore* of JG 2, was shot down and killed in combat with Spitfires off the Isle of Wight on 28 November 1940, flying Bf 109E-4 Wk-Nr 5344. No trace of him was ever found. At the time of his death, he was credited with 56 victories, making him the highest scoring Bf 109E pilot at that stage of the conflict. In this photograph he is wearing the bulky and often problematic kapok Model 10-76A *Schwimmweste*. To his right is the rudder of his Bf 109E, newly marked with his 22nd victory (claimed on 26 August 1940). (1940 History)

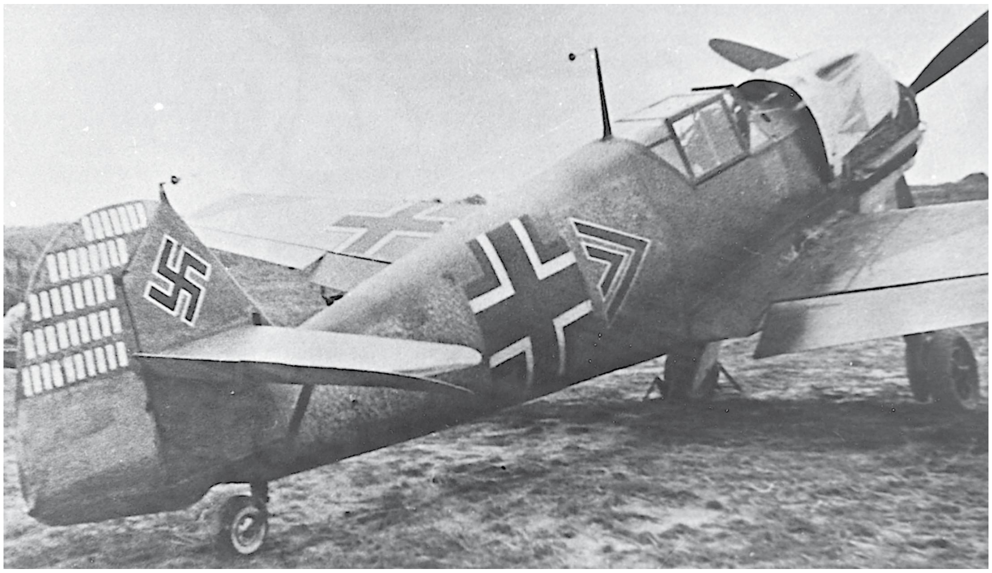
What Johnstone probably did not realise was that the Bf 109 pilots really had no choice other than to turn for France so quickly since they were already at the limit of their range and endurance. Fuel reserves after their brief combat were running low for the long flight home over the sea. Indeed, so desperately short was Wick's fuel on his return from this combat operation that he was unable to carry out his customary victory rolls over his home airfield. Again, this highlighted the Bf 109E's often critical fuel situation when operating over Britain.

Despite Wick's assertion that he had downed at least one of Johnstone's Spitfires (the German ace's actual claims for the combat show three Spitfires downed), this was not the case. Either he incorrectly believed he had shot down some of the Spitfires or, more likely, he had misidentified his Hurricane victims as Spitfires in the heat of battle. Either way, JG 2 over-claimed in this action with a reported tally of eight destroyed – five Hurricanes and three Spitfires. If we count one Hurricane from No 145 Sqn that made a forced landing back at Tangmere after combat with the Messerschmitts over the Isle of Wight, then JG 2's tally can only be made to reach a maximum of four. In reality, just three RAF fighters had been downed in the actual combat zone.

Nevertheless, there can be little doubting that all of the Hurricanes fell to the guns of JG 2, with Maj Wick and fellow high-scoring aces Oberleutnante Erich Leie and Hans Hahn all making claims over Southampton and the Isle of Wight area in this combat. Wick claimed two Hurricanes and three Spitfires destroyed, Leie was credited with two Hurricanes and Hahn also downed a Hurricane. As this action proves, for the Luftwaffe and RAF fighter pilots of 1940, the Battle of Britain certainly was not over yet.

As a day fighter over Britain during 1940, the Bf 109E had been a tough and able opponent of the RAF's Spitfires and Hurricanes and had easily out-performed the only other British 'fighter', the Boulton Paul Defiant – an aircraft, anyway, that was conceived solely as a bomber destroyer to contend with unescorted bomber formations, and had never really been expected to engage with Bf 109s. When it did, the outcomes were unsurprisingly disastrous for the Defiant, which was never a contender for doing battle with the Bf 109E.

Here, it is perhaps also appropriate to address the oft-repeated story that the Messerschmitt Bf 110 had become such an abject failure as a long-range escort fighter that it had to be escorted itself by Bf 109E units! Setting aside the alleged poor performance of the Bf 110 over Britain during 1940 (despite the ratio tables in this chapter telling a slightly different story about the *Zerstörer*), it is important to stress that the supposed 'escort of escorts' never occurred. At times, the Bf 110 and Bf 109 units were engaged on the same operations, but it was never the case that the Bf 109s were 'escorting' the Bf 110s.



Major Wick's Bf 109E-4 had been decorated with 42 victory bars by mid-October, the aircraft being seen here between missions at Beaumont-le-Roger. (Tony Holmes Collection)

In part, this myth may have arisen following something written by Adolf Galland during the 1950s in the Argentinian publication *Revista Nacional de Aeronautica*. In it, he stated:

> When units of the Bf 110 twin-engined long-range fighters had originally been formed, it was intended that they should be used to escort bombers. The Bf 110 was unable to give a good account of itself in combat with British fighters, and it was for this reason that the enemy singled them out for attack. When they were attacked, the Bf 110s were obliged to make a series of defensive tight turns.
>
> Although no-one was willing to admit it, this was essentially a defensive measure. The twin-engined fighters had to rely on Bf 109s coming to their assistance. Otherwise, they had to escape as best they could. As a result, from this time onwards, when twin-engined fighters were used to escort bombers, they were accompanied by single-seat fighters.

The actuality of what Galland was saying, or the essence of his meaning, was surely that the Bf 110s alone could not be relied upon to provide adequate escort for the bombers, and thus they needed to be backed up by the Bf 109s, not that the Bf 109s were there to protect the Bf 110s. In any case, even *backing up* the Bf 110s was not always possible for the hard-pressed Bf 109E units.

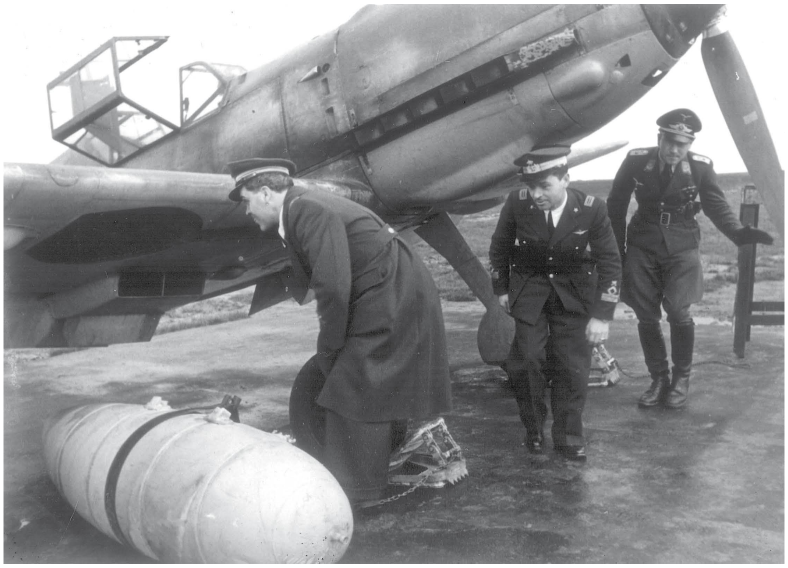
Indeed, it would have been impossible when an escort was required for bombers attacking targets in the West Country or, say, airfields such as

Duxford, in East Anglia, as these areas were well beyond the range of the Bf 109E. In these instances, the Bf 110s were on their own – and such daylight raids, escorted by Bf 110s, were continuing until as late as 7 October.

Nevertheless, Galland did go on to say in the same piece, specifically, that 'moreover, to enable them to act as direct fighter escort to the bombers, they themselves had to be provided with a fighter [Bf 109E] escort.' Quite simply, there is absolutely no evidence that such 'escort for escorts' situations ever arose, and it is the conclusion of this author that Galland had simply misremembered the facts. What he said about the Bf 109Es sometimes going to the assistance of Bf 110s in trouble had more than a ring of truth about it though.

On 1 September, one of his own JG 26 Bf 109E pilots, Leutnant Josef Buerschgens of 7./JG 26, went to pick a Spitfire off the tail of a Bf 110 somewhere to the north of Rye. Having done so, and as the smoking RAF fighter dived away, Buerschgens found himself being fired at by the rear gunner of the Bf 110, who presumably thought that another Spitfire was coming in to attack. The gunner turned out to have been a good shot, putting rounds into the Bf 109E, disabling it, and causing Buerschgens to abandon his aircraft and descend into captivity. Sometimes, it was not just the enemy that one had to worry about!

Notwithstanding its successes against the RAF's day fighters of the period, the Bf 109E had its limitations – not least of all its range. As early as the first days of the Battle of Britain, range limitations had been obvious, and yet nothing was done to solve this problem through the fitment of external drop tanks. This could have been so easily achieved. Already, long-range tanks had been used in Spain with the He 51B-2 fighter, which carried a 170-litre tank on operations with the *Legion Condor*. Furthermore, during the Battle of Britain, the Ju 87R-1 Stuka had used 300-litre drop tanks made by Norddeutsche Kühlerfabrik. Thus, the means to easily produce such tanks was there, just not the will to do so.



Although this aircraft is a Bf 109E-6 photo-reconnaissance machine of 4(F)./123, the image provides a good view of the 300-litre drop tank which came into use towards the end of 1940 – too late to have any impact on Bf 109E operations over England in the Battle of Britain. Here, an officer of the unit shows Italian air force personnel over the Messerschmitt. It was an aircraft of this same unit which became the last Bf 109E to fall on English soil when Unteroffizier Kurt Thune bailed out of his aircraft over Devon on 7 January 1942. (1940 History)

In part, all this *laissez faire* may well have been due to arrogance on the part of the Luftwaffe's high command, who initially reasoned that Britain was on its knees, that RAF Fighter Command was already a weakened force, and that early defeat in the air and a gaining of air superiority was an absolute given. As a result, the acquisition of range-extending tankage for the Bf 109Es was not regarded as a priority.

However, by 15 August 1940, Generalfeldmarschall Erhard Milch (Secretary of the State for Aviation and Inspector General of the Luftwaffe) had again raised this matter, and subsequently stated that it had also been discussed many months prior to it becoming a more pressing issue than was now the case. The drop tank requirement had been ignored until it became obvious that the Bf 109E's modest range was going to be an insurmountable problem as the Battle of Britain progressed.

Already available was a moulded plywood tank, but the device warped and leaked. In any case, the majority of the Bf 109Es in service lacked suspension points, piping and booster pumps associated with the fitment and usage of such a store. However, the Bf 109E-7 that was just entering service boasted the racks, pipes, pumps and switches to carry Junkers/NKF 300-litre tanks. Meanwhile, existing Bf 109E-1/B and Bf 109E-4/B *Jabo* were already equipped with the necessary racks (i.e. bomb racks), but the aircraft would need to be retro-fitted with ancillary fuel systems and equipment to make the tanks usable.

Finally, by early November, the tanks had reached frontline units, although it was not until the very last day of the month that evidence of these new bits of kit was finally discovered in Britain by the RAF after the downing of a Bf 109E-1 from 6./JG 53 flown by Feldwebel Hermann Schmid. Following examination of the aircraft, which crash-landed at Smeeth, in Kent, intelligence officers stated in their RAF air intelligence A.I.1(g) technical report:

> This aircraft was fitted with an additional tank . . . and fuel lines for extra fuel tankage. There was a notice in the cockpit to this effect, and instructions to pump over petrol after one-and-a-half hours' flying. This instruction was hanging on the oil cock.

The report went on to note that the aircraft was fitted with a 250kg bomb rack, and that fuel lines ran down to the bottom of the fuselage, it thus being assumed that a jettisonable fuel tank had been carried. This assumption was further strengthened by the discovery in countryside nearby of a 'metal streamlined petrol tank' which, it was noted, could be slung from the external bomb rack of the Bf 109E. It had most likely been jettisoned by Schmid before he crash-landed.

Had it been implemented earlier, then the drop tank would have extended the Bf 109E's radius of operation from the Pas-de-Calais to a little over 320km. This would have been sufficient, for example, to escort bombers in an attack on Duxford, or to targets such as the airframe and aero engine factories in Britain's midlands. Theoretically, this could have forced RAF Fighter Command to base significant numbers of Spitfires and Hurricanes much further north, and possibly as far as the Humber. At the very least, it would have given the Bf 109E much more flexibility in terms of limits to its operating times over southern England. However, the lack of external tanks was just one of many tactical and strategic blunders made by the Luftwaffe during the summer of 1940.

In terms of its performance in combat relative to the other main fighters of the Battle of Britain, the statistics as they relate to the Bf 109E make for interesting comparisons. They are as below:

Spitfire circa 560 claims to 394 losses – a ratio of 1.4:1
Hurricane circa 715 claims to 603 losses – a ratio of 1.2:1
Bf 109 circa 760 claims to 534 losses – a ratio of 1.4:1
Bf 110 circa 290 claims to 196 losses – a ratio of 1.5:1

From the above, it can be seen that Bf 109E losses were significant at 534. It is also noteworthy, however, that every fighter type suffered significant losses.

As the period which became known as the Battle of Britain was drawing to its close, so the Luftwaffe was starting to tentatively deploy the first of the Bf 109E's successors, the Bf 109F. On 25 October 1940, it is known that early-build F-models were in action over Britain. Nevertheless, the Bf 109E would be the dominant German fighter on the Channel Front well into 1941.

Still in widespread use as the final months of 1940 petered out, it was a Bf 109E that carried JG 2's Major Helmut Wick to his death on 28 November 1940. Operating again over the Isle of Wight, Wick's formation was engaged by Spitfires from Nos 152 and 609 Sqns. His aircraft, Bf 109E-4 Wk-Nr 5344 of *Stab* I./JG 2, was sent crashing into the English Channel off The Needles following a fierce but brief engagement. Wick was seen to jettison his cockpit canopy and bail out, but no trace of him was ever found despite searches by the German air-sea rescue service. Moments before his luck ran out, Wick had scored his 56th, and last, victory, having become one of the leading exponents of aerial fighting in the Bf 109E.

By the spring of 1941, the few remaining *Jagdwaffe* units on the northern French and Belgian coasts that had not already been withdrawn for operations in other theatres continued to undertake occasional fighter and *Jabo* missions into the southeast corner of England. But these were as few as they were ineffectual, only serving to underline the fact that the Bf 109E's day over Britain was done. Although not quite.

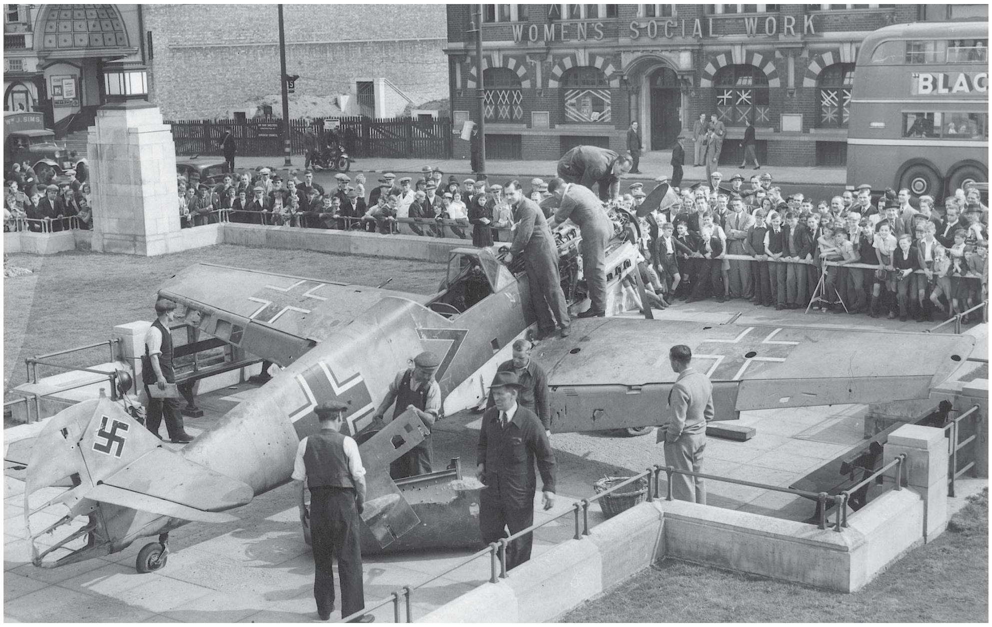
On 7 January 1942, the last Bf 109E came down over England when Unteroffizier Kurt Thune was forced to bail out of his Bf 109E-7 of 4(F)./123, a photo-reconnaissance unit, over Ashburton, in Devon, following engine failure. The E-model would not be seen in the skies over Britain again.

By then, the newer Bf 109F was already being lined up for replacement by the Focke-Wulf Fw 190, which had begun to reach frontline units on the Channel Front in September 1941. The Bf 109E was now well and truly redundant as a fighter. Interestingly, even the Spitfire (which, by now, had evolved into the Mk V) was similarly outdated. Its perceived obsolescence prompted recently retired Air Chief Marshal Sir Hugh Dowding, head of RAF Fighter Command in 1940, to write to Prime Minister Winston Churchill on 8 September 1942, saying:

> The Spitfire has been moribund as a Home Defence fighter for two years and died when the Focke-Wulf 190 made an appearance.

It was an interesting observation, and one that would seem to imply that Dowding actually believed the Spitfire to have been past its shelf life *before* the end of the Battle of Britain. If we take the word 'moribund' at its literal meaning, then Dowding rather astonishingly believed the Spitfire to be 'half dead' before the Battle of Britain was even done! And perhaps he had a point. If the consensus were to be that, say, the Bf 109E and the Spitfire I were *relatively* evenly matched, then one could reasonably advance the suggestion that the RAF needed something better than the Bf 109E. Not something that could match it.

Whatever the truth of the matter, it is certainly the case that many would agree with the opinion that, more often than not, the Spitfire and Hurricane were bettered in combat by their Bf 109E opponents during the Battle of Britain.



No fewer than 534 Bf 109Es were lost during the Battle of Britain, a significant number of them making reasonably good belly landings in southern England. Of these, many were earmarked for public display around the British Isles and exhibited to raise money for the Spitfire Fund or other charitable causes. This is Bf 109E-1 Wk-Nr 5608 of *Stab* I./JG 2, which was force-landed by Oberleutnant Paul Temme near Shoreham Airport, in West Sussex, on 13 August 1940. It is seen here being prepared for exhibition in a London street. Bf 109Es like this continued to be displayed around Britain well into 1941, and once their usefulness had been exhausted they were scrapped. (1940 History)

SELECTED SOURCES

Baker, David, *Adolf Galland – The Authorised Biography* (Windrow & Greene, 1996)
Bekker, Cajus, *The Luftwaffe War Diaries* (Macdonald & Co. Ltd, 1966)
Bergstrom, Christer, *The Battle of Britain – An Epic Conflict Revisited* (Casemate, 2015)
Caldwell, Donald, *The JG 26 War Diary, Vol. One 1939–1942* (Grub Street Publishing, 1996)
Dildy, Douglas C. and Crickmore, Paul F., *To Defeat the Few* (Osprey, 2020)
Galland, Adolf, *The First and the Last* (Methuen, 1955)
Goss, Chris, *Brothers in Arms* (Crécy Books, 1994)
Grabler, Josef, *Helmut Wick, Des Leben eines Fligerhelden* (Verlag Scherl, 1941)
Krajči, Milan, *Messerschmitt Bf 109E Units in the Battle of Britain, Parts 1–3* (Red Kite, 2020)
Mason, Francis K., *Battle over Britain* (McWhirter Twins, 1969)
Mombeek, Eric, *Jagdwaffe – Battle of Britain, Phase 1–4* (Classic Publications, 2001)
Parker, Nigel, *Luftwaffe Crash Archive, Vols. 1–6* (Red Kite, 2013)
Parry, Simon, *Battle of Britain Combat Archive, Vols. 1–13* (Red Kite, 2015–2023)
Payne, Michael, *Messerschmitt Bf 109 in the West, 1937–1940* (Greenhill, 1998)
Prien, Jochen, *Jagdgeschwader 53* (Schiffer Military Publishing, 1997)
Priller, Josef, *JG 26 Geschichte Eines Jagdgeschwaders, 1937–1945* (Motorbuch Verlag, 1980)
Ramsey, Winston G., *Battle of Britain Then and Now* (After the Battle, 1980)
Saunders, Andy, *Battle of Britain Operations Manual* (Haynes, 2015)
von Forell, Fritz, *Mölders und seine Manner* (Steirische Verlagsanstalt, 1941)
Weal, John, *Osprey Aviation Elite Units 1 – Jagdgeschwader 2 'Richthofen'* (Osprey, 2000)
Weal, John, *Osprey Aviation Elite Units 15 – Jagdgeschwader 52 – The Experten* (Osprey, 2004)
Weal, John, *Osprey Aviation Elite Units 22 – Jagdgeschwader 51 'Molders'* (Osprey, 2006)

Transcripts from interviews with former Luftwaffe personnel by the author and others, including papers from the late Dr Alfred Price. Information also drawn from *The Battle of Britain RAF Narrative*, Air Historical Branch, circa 1950. In addition, translation of an article by Adolf Galland in the Argentinian publication *Revista Nacional de Aeronautica,* circa 1950s.

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Andy Saunders is an author, researcher, television and film consultant, editor and former museum curator specialising in military aviation and history. He is the editor of the acclaimed German military history magazine *Iron Cross* and author of more than 20 books on air warfare. His articles have appeared in *Britain at War* (which he also edited for almost ten years), *Aeroplane Monthly, Aviation News, After the Battle, History of War* and *FlyPast*, among many others.

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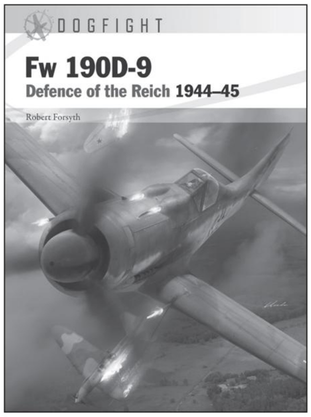
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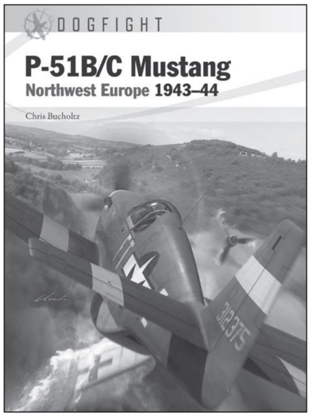
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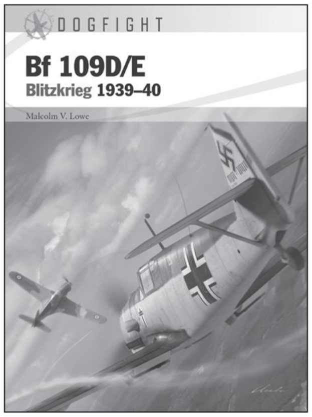
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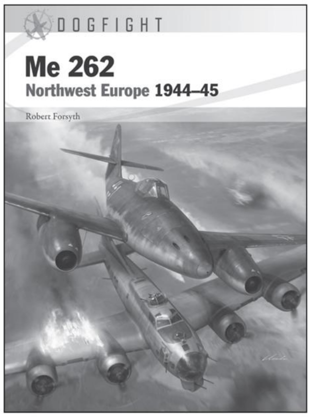
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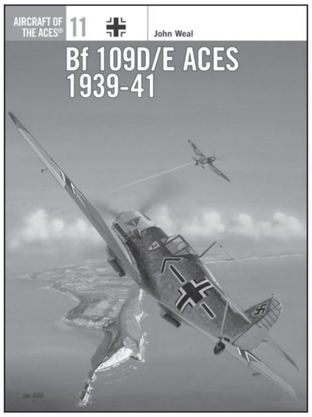
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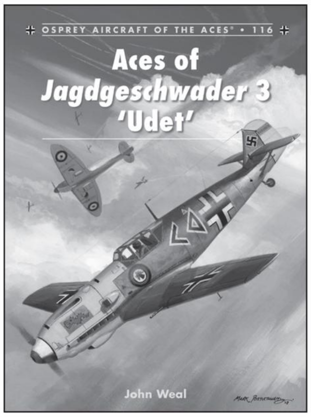
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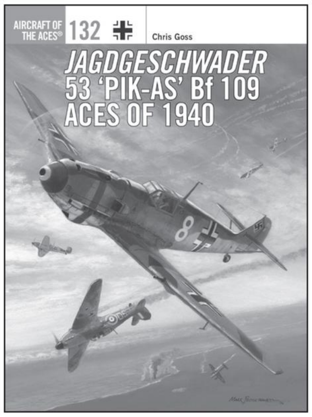
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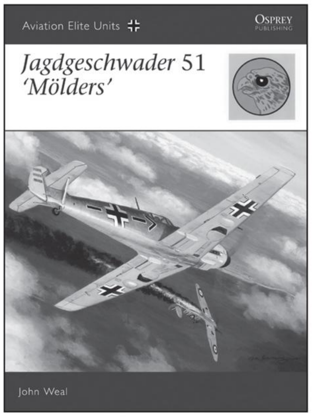
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Front Cover Artwork: Oberleutnant Gerhard Schöpfel served with III./JG 26 from the outbreak of war in Poland, and he claimed his first victory (unconfirmed) during the Battle of France on 19 May 1940. His first confirmed success came ten days later, and he ended the campaign in France with four victories. Claiming his first two kills in the Battle of Britain on 8 August, Schöpfel was credited with four No 501 Sqn Hurricanes destroyed during a single brief engagement near Canterbury, in Kent, ten days later. This is the scene depicted in the cover artwork by Gareth Hector. The last of the four Hurricanes shot down was flown by Plt Off Kenneth Lee, who bailed out with wounds over Whitstable, in Kent. Schöpfel engaged Lee's Hurricane at such close range that the stricken fighter sent oil and debris crashing into his Bf 109E, forcing him to break off an intended attack on the rest of the squadron. Gerhard Schöpfel was *Staffelkapitän* on 9./JG 26 at the time of this action, and he went on to command III./JG 26. By 7 September he had claimed 20 victories, and Schöpfel was awarded the Knight's Cross four days later. He went on to serve in various units in different theatres of operation in both command and staff positions. Schöpfel was captured by Soviet forces in May 1945 and eventually released in 1949. He ended the war with 45 victories, all of them claimed on the Western Front. He died in 2003.

Title Page: The Bf 109E-4 flown by Oberleutnant Gerhard Schöpfel, *Staffelkapitan* of 9./JG 26, parked in its dispersal area at Caffiers, in the Pas-de-Calais, in August 1940. It was in this aircraft that Schöpfel scored his remarkable four victories in a row over Hurricanes of No 501 Sqn on 18 August 1940. (1940 History)

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